

DVELOP TOOLKIT

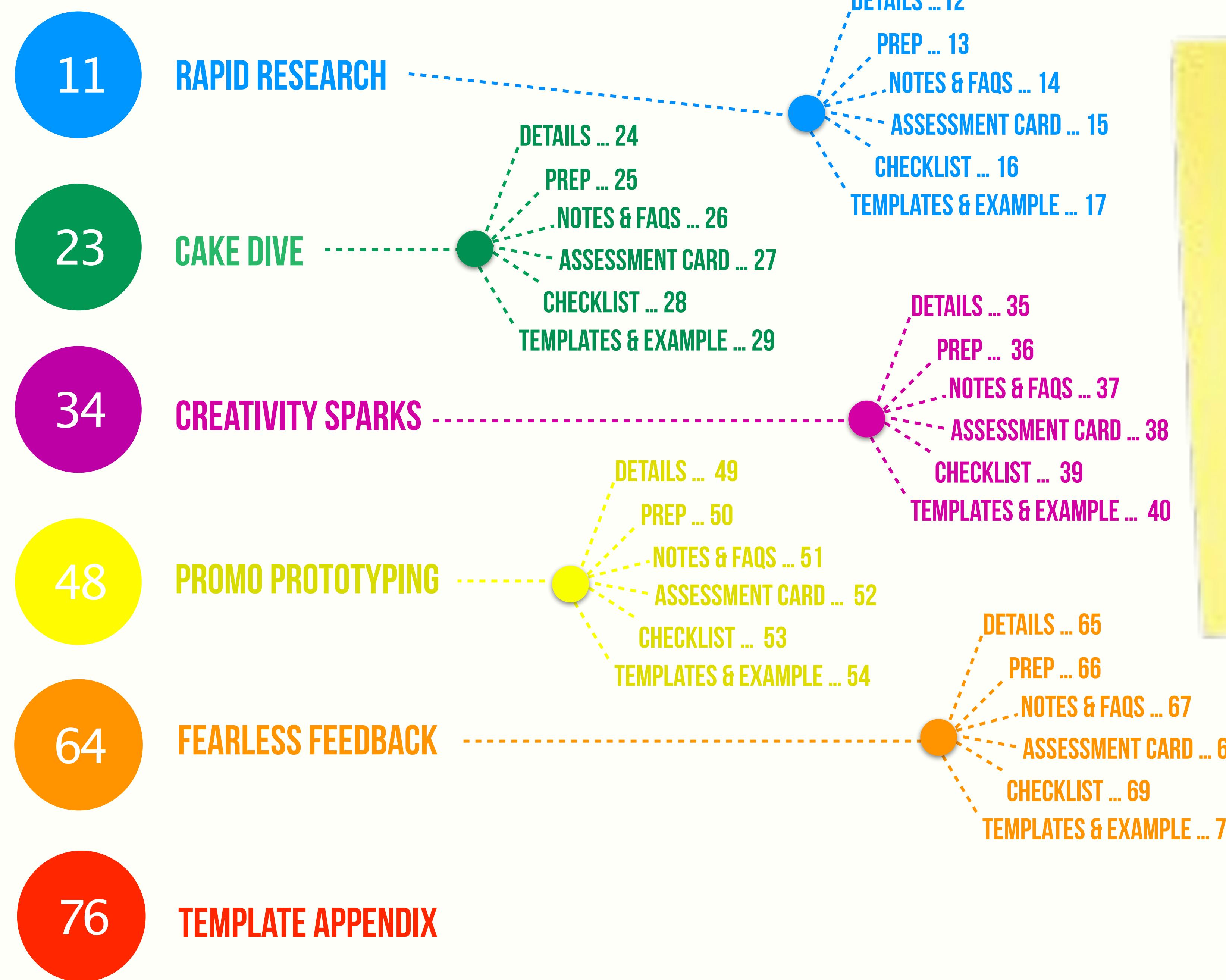
A DESIGN THINKING TOOLKIT FOR K-12
CURRICULUM DEVELOPMENT

rewed

WELCOME, HEROES.

EVERY PERSON REMEMBERS THEIR FAVORITE TEACHER. YOU
ARE MENTORS, DESIGNERS, ENTREPRENEURS AND HEROES.
WE DESIGNED THIS TOOLKIT TO HELP YOU DO WHAT YOU DO
BEST, WITH AN ADDED SECRET INGREDIENT: DESIGN
THINKING.

TABLE OF CONTENTS



DESIGN THINKING IS
“AN APPROACH TO INNOVATION THAT DRAWS FROM THE
DESIGNER’S TOOLKIT TO INTEGRATE THE NEEDS OF PEOPLE,
THE POSSIBILITIES OF TECHNOLOGY, AND THE REQUIREMENTS
FOR SUCCESS.” -TIM BROWN, CEO, IDEO

THE DESIGN PROCESS

EMPATHIZE

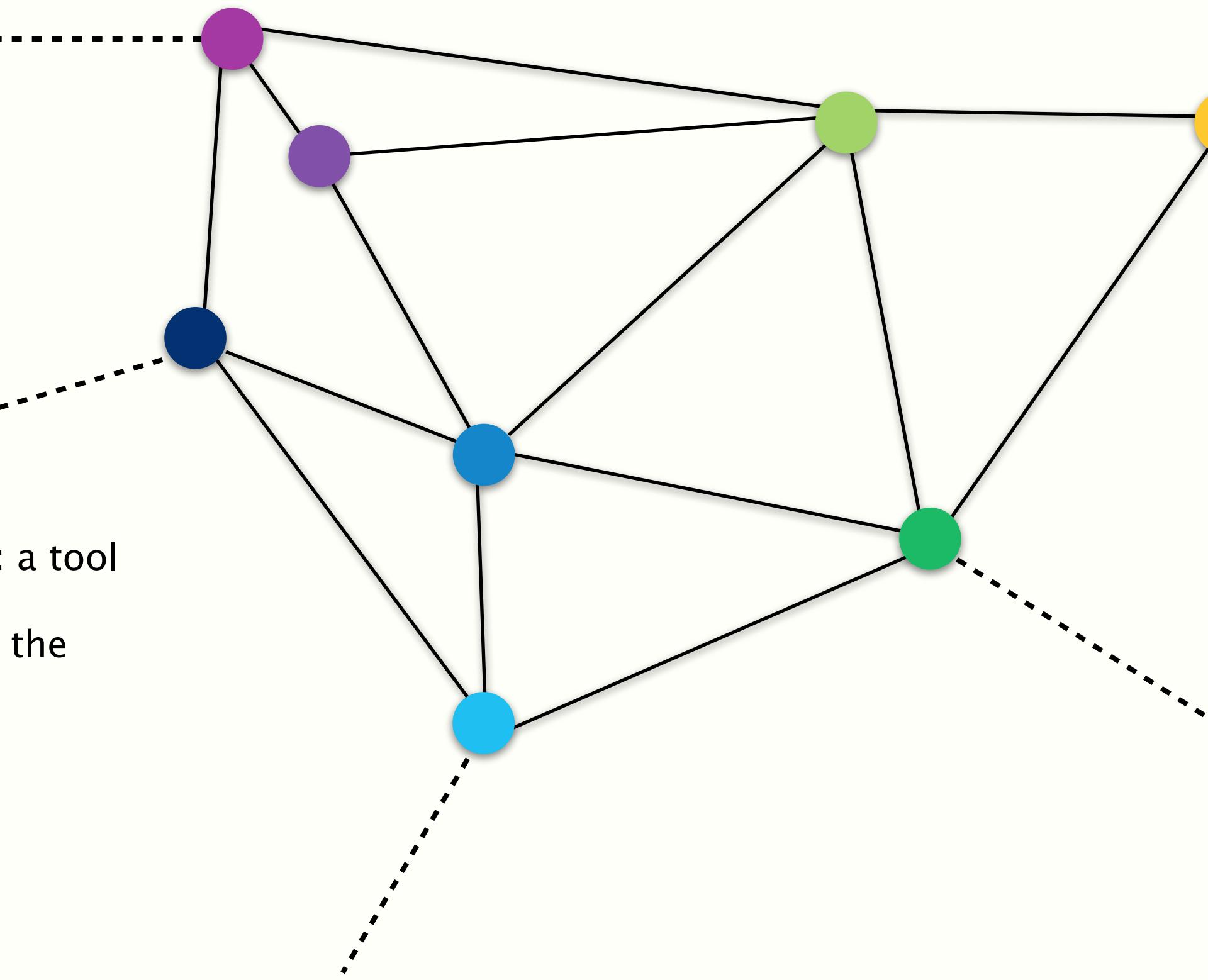
deep dive into people's lives and needs. This is where the "human" in human-centered design comes in. Through immersion, observation, and engagement we recognize deep seeded needs.

DEFINE

next we develop a Point of View: a tool to sort through all the empathy research and define the heart of the problem.

IDEATE

here we harness the insights from our research and empathy work to come up with ideas for solutions. Every person is wildly creative, and ideation unleashes that creativity to solve a problem.



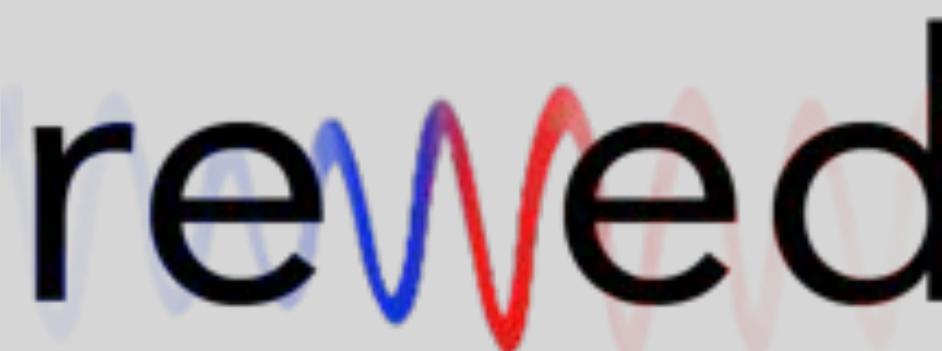
TEST

put your prototypes in the hands of the user. From here, we draw on our empathy tools to iterate on both the prototype and the cycle until we have the most delightful product imaginable.

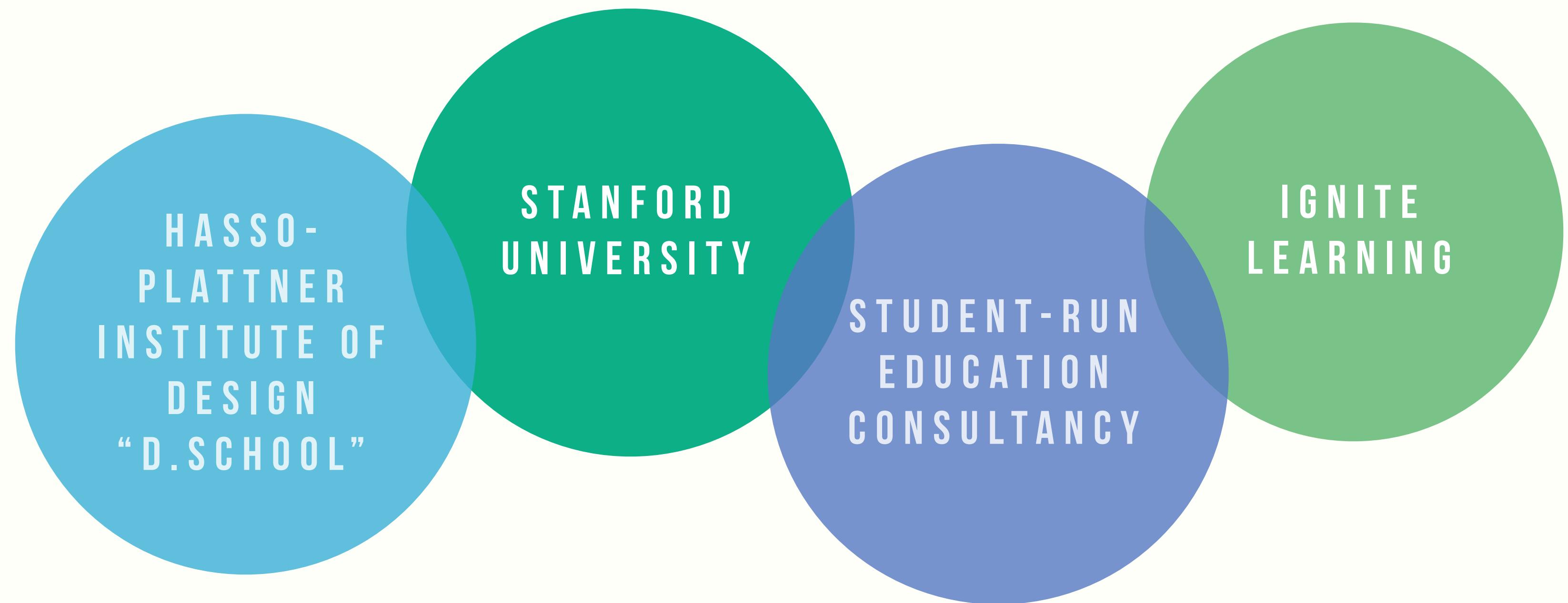
PROTOTYPE

make, make, make. That is the motto of design thinking. Instead of mulling over an idea and wasting time planning for it to work when it may be the entirely wrong idea, create low-res prototypes as soon and as often as possible.

DEAR EDUCATORS,
WHEN WE WERE YOUNG, WE LIKED TO *MAKE THINGS*. WE
GREW UP TO BE WRITERS, DESIGNERS, PROGRAMMERS,
EDUCATORS, ENTREPRENEURS, PARENTS, AND ENGINEERS. BUT
AT HEART, WE'RE *STUDENTS* WHO WANT TO SHARE OUR
LOVE OF *LEARNING* AND *INNOVATION*.

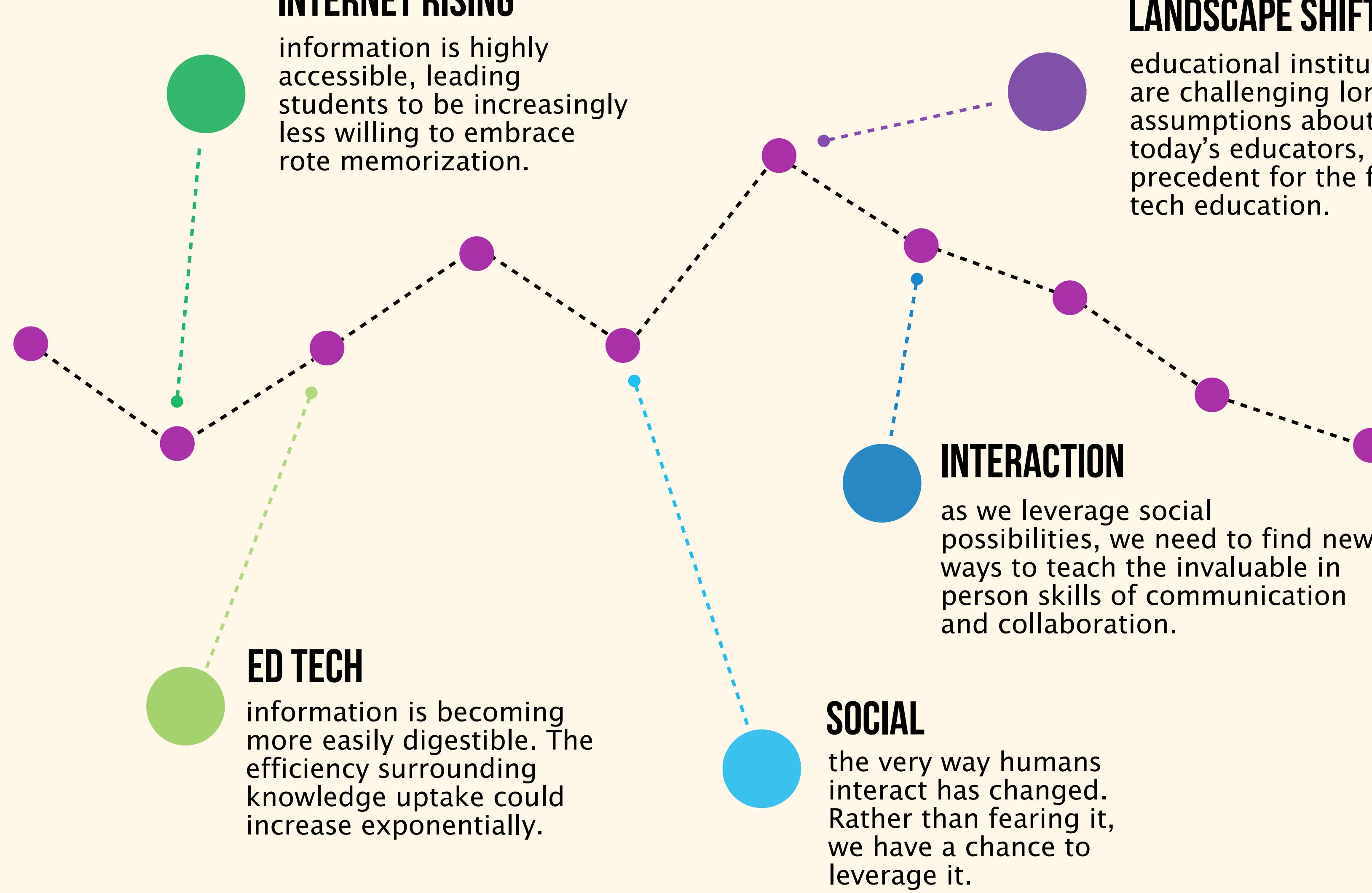


OUR INSPIRATION



WE HOPE TO IMPROVE
THE WAY TEACHERS
TEACH AND LEARNERS
LEARN IN THE 21ST
CENTURY. WHETHER
YOU FALL INTO THE
MAINSTREAM
DEFINITION OF EITHER
OF THESE OR NOT, WE
WANT TO SUPPORT YOU
IN YOUR JOURNEY TO
BETTERING EDUCATION.

WHY NOW



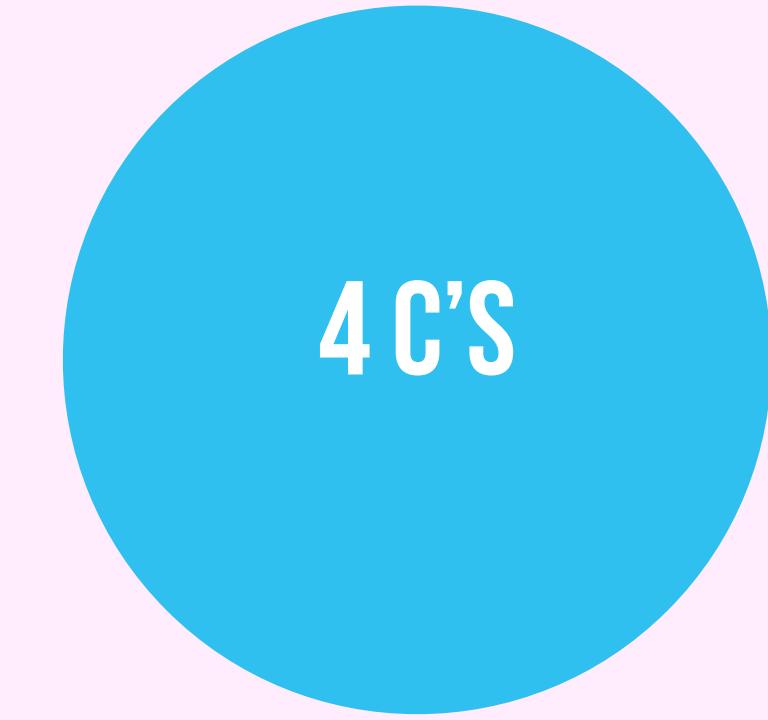
WHY DESIGN IN THE CLASSROOM



MULTI-DISCIPLINARY



MINDSET



4 C'S

MULTIDISCIPLINARY

design thinking can be applied to curriculum development for any subject or grade level. It is an exciting way to express creativity and teach students valuable life skills while studying any subject. As technologies used in the classrooms

MINDSET

we live in a world of increasing complexity. Learners and educators need a framework to approach the wide set of existing needs with curiosity and readiness. Design thinking offers a mindset that encourages these skills.

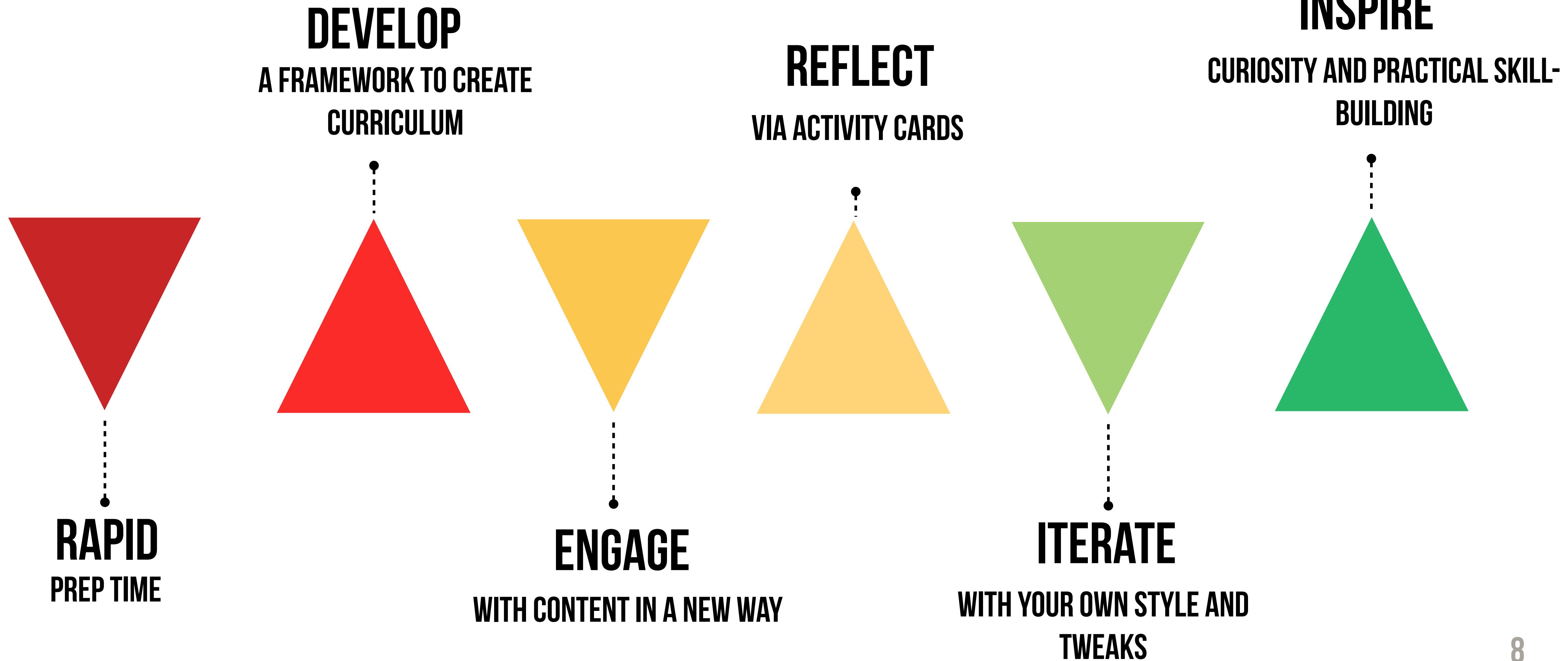
THE 4 C'S

design thinking encourages collaboration, creativity, critical thinking, and communication. It creates an engaging learning environment that teaches students skills highly valued by educational institutions and employers.

USING THIS TOOLKIT

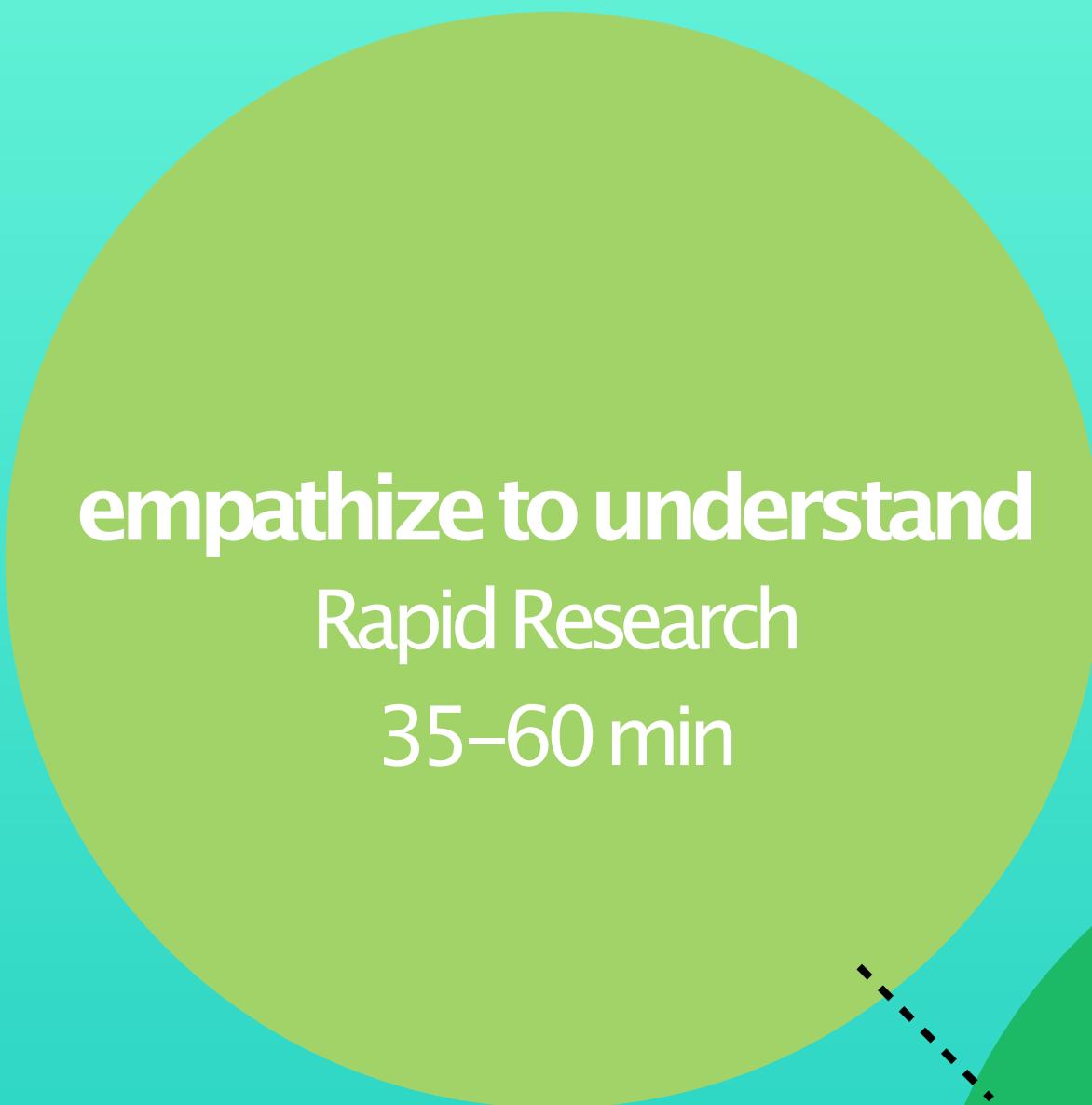
WE'VE DESIGNED THIS SERIES OF EXERCISES AS A WAY TO APPROACH YOUR CURRICULUM DEVELOPMENT USING DESIGN THINKING. THE EXERCISES ARE HIGHLY VERSATILE, SO USE THEM IN ONE UNIT OR MIX AND MATCH ACTIVITIES.

DESIGN EFFECTIVE LESSON PLANS



PROPOSED PLAN

USE THESE ACTIVITIES OVER
THE COURSE OF A 5 CLASS
UNIT, OR AS STAND ALONE
ACTIVITIES FOR ANY SUBJECT.



APPLIED EXAMPLES

AFTER EACH ACTIVITY, THERE ARE TEMPLATES. FOLLOWING THE TEMPLATES IS AN APPLIED EXAMPLE OF THE ACTIVITY, AS USED IN MRS. SMITH'S 6TH GRADE CLASSROOM. HERE, WE USE THE TOPIC OF THE AMERICAN REVOLUTION.

ACTIVITY 1:

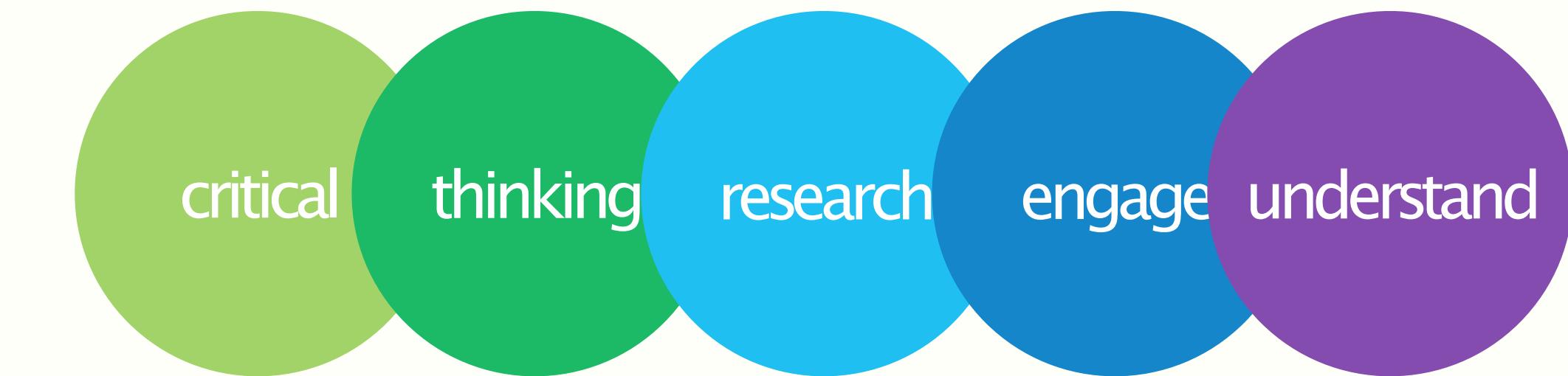
RAPID RESEARCH

IMMERSE YOURSELF

EMPATHIZE TO UNDERSTAND

RAPID RESEARCH

- › LESSON DETAILS
- › PREP
- › PROCESS NOTES
- › FAQS
- › ASSESSMENT CARD
- › APPLIED EXAMPLE
- › DESIGN CHECK-LIST



THIS EXERCISE TEACHES DESIGN THINKING AS IT APPLIES TO RESEARCH. THE GOAL IS TO ENABLE STUDENTS TO QUICKLY, EFFICIENTLY, AND COMFORTABLY BECOME “EXPERTS” IN A FIELD OF RESEARCH THROUGH A CREATIVE AND FUN PROCESS. THIS PHASE ENGAGES STUDENTS WITH THE SUBJECT’S KEY FACTS WHILE FORCING THEM TO PRACTICE CRITICAL THINKING BY DRAWING CONNECTIONS. RAPID RESEARCH LEVERAGES THE DESIGN THINKING VALUES OF IMMERSING, OBSERVING AND ENGAGING DURING RESEARCH IN ORDER TO UNDERSTAND.

LESSON DETAILS

The stage is set when students walk into the classroom to a watch a 38 second clip from the matrix: (<http://www.youtube.com/watch?v=6AOpoMu9V6Q>). In the memorable clip, the protagonist, Neo, glances at a helicopter and asks his comrade, Trinity, "Can you fly that thing?" Her answer, though brief, provides the core motivation of this exercise: "not yet." She proceeds to ask for a "pilot program" and rapidly becomes an expert pilot.

We got to thinking, why can't humans digest knowledge faster and more efficiently? The answer we found was simple: we can. With today's technology and the right questions, we can uptake information faster than ever- we're just never given the chance. This activity was designed to be as close to the real-life version of a "program load" as possible. It has been used in various courses at Stanford University to speed up the research process and allow students to become deeply knowledgeable on specific topics.

After watching the clip, take a few minutes to present the activity to the class. Discuss the reality that in today's digital world, information is at our fingertips.

While we cannot download muscle memory skills directly to our brains, we can become experts in a specific subject much faster than before if we learn how to critically navigate information. Challenge them to work hard in this activity, as it can provide them a more interesting and efficient way to approach research for the rest of their lives.

After the brief discussion, split the class into teams of four to five people. Explain that the class will be doing a deep dive into the subject by understanding a few fundamental questions. Share the time limit with them, and announce that at the end of the activity an oral class quiz will be given and each team's board will be graded. Then, throw on some high energy working music and reveal the fundamental questions that you prepared ahead of time. Depending on the age level of the students, you may want to circle around throughout the activity to ensure that the teams are engaging and discussing the answers. Periodically remind the teams to be asking why their response is the right one.

empathize to understand

ACTIVITY PREP

- › projector with connectivity for video clip
- › speakers to play music during activity
- › post-it notes/paper & pens/markers
- › 1 poster board or white board space per team
- › timer or way to display time remaining
- › tape

we know resources vary. The only material students truly need access to is either the internet or a textbook where they can research answers to the questions you propose.

- › have projector set up with video clip
- › have a station for each team set up with whiteboard, poster board or some way to capture their research.
- › preselect upbeat but non-distracting music to play during the activity

space plays a huge role in the energy of the classroom. Encourage students to stand up as they discuss around the board, poster, or computer to keep the energy engaging.

SUGGESTED
RESOURCES

CLASSROOM
SET-UP

1

2

3

4

5

CURRICULUM SET-UP

choose which subject you want to have the lesson on.

devise research questions you want the students to answer. Try to make them foundational, key questions to understanding the subject. For a 20 minute session, create 2-3 questions, and for a 40 minute session create 5.

do your homework! Be sure you have the answers to the questions your asking.

divide students into teams of 4-5 people. Feel free to pull together teams with different strengths, or however you feel best. It may be helpful to designate one person per team "the guardian", in charge of making sure everyone's voice is being heard.

set up the classroom, either with the questions posted on the board or at each individual team station.

PROCESS NOTES

THE QUESTIONS YOU DESIGN ARE KEY HERE. KEEP THESE GUIDELINES IN MIND:

1

facts can be grabbed off the internet, but gaining deep understanding is more important. Try to design questions that would require them finding and tying together important facts.

2

once you've written the questions, answer it yourself. From the initial answer, ask yourself "why?" Continue to peel back the layers, getting to the heart of the matter. When you feel you've gotten there, try and reformulate the question to lead students there.

3

Use the oral quiz at the end as an entry into a deeper discussion about the subject. We recommend grading based on the included assessment card, but you know what's best for your students.

FAQS

WE LOVE QUESTIONS. IF THESE DON'T DO IT FOR YOU, FEEL FREE TO CALL OUR 24 HOUR HOTLINE AT (707) 820-REVV

1

how do I know if my questions are foundational enough?
try to do the "why" exercise in the process notes. If you can peel through at least five layers, your question requires a good amount of logic to pull facts together.

2

what do I do if they finish too early or not in time?
having a few back-up questions is never a bad idea for the true rapid researchers. Feel free to give teams some additional questions if they finish early, or allow

3

I don't have a projector- can I still engage with the clip?
absolutely! You could write a prompt on the board: "What if you could instantly download any knowledge to your brain?" Or, if you want visuals, you can send the clip out ahead of time, or even invite another teacher in to help you reenact the scene.

ASSESSMENT CARD

PERSONAL ASSESSMENT

ASK YOURSELF THE FOLLOWING TO CHALLENGE YOURSELF AS A DESIGNER AND EDUCATOR.

1

are my students able to quickly find something relevant and interesting based off my questions?

2

did I encourage students to be actively engaged in the research process?

3

how did the environment I set up (music, tone, space, materials) influence the students?

4

what was the most positive thing I did during this exercise, and how can I amplify that variable?

5

what was the most negative thing I did during this exercise, and how can I get rid of that variable?

STUDENT ASSESSMENT

WE RECOMMEND USING THESE AS A GUIDELINE FOR GRADING, AND SHARING THEM AT THE START WITH THE STUDENTS.

1

team grade: was the whole team engaged in the research process?

2

team grade: how much information did this team gather compared to the other teams?

3

team grade: how many times did this team correctly answer questions during the oral quiz?

4

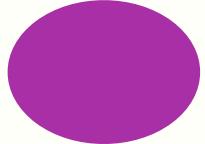
individual grade: did this student demonstrate an understanding of the topic during the discussion?

5

individual grade: did the student demonstrate an ability to draw conclusions from facts during the discussion or oral quiz?

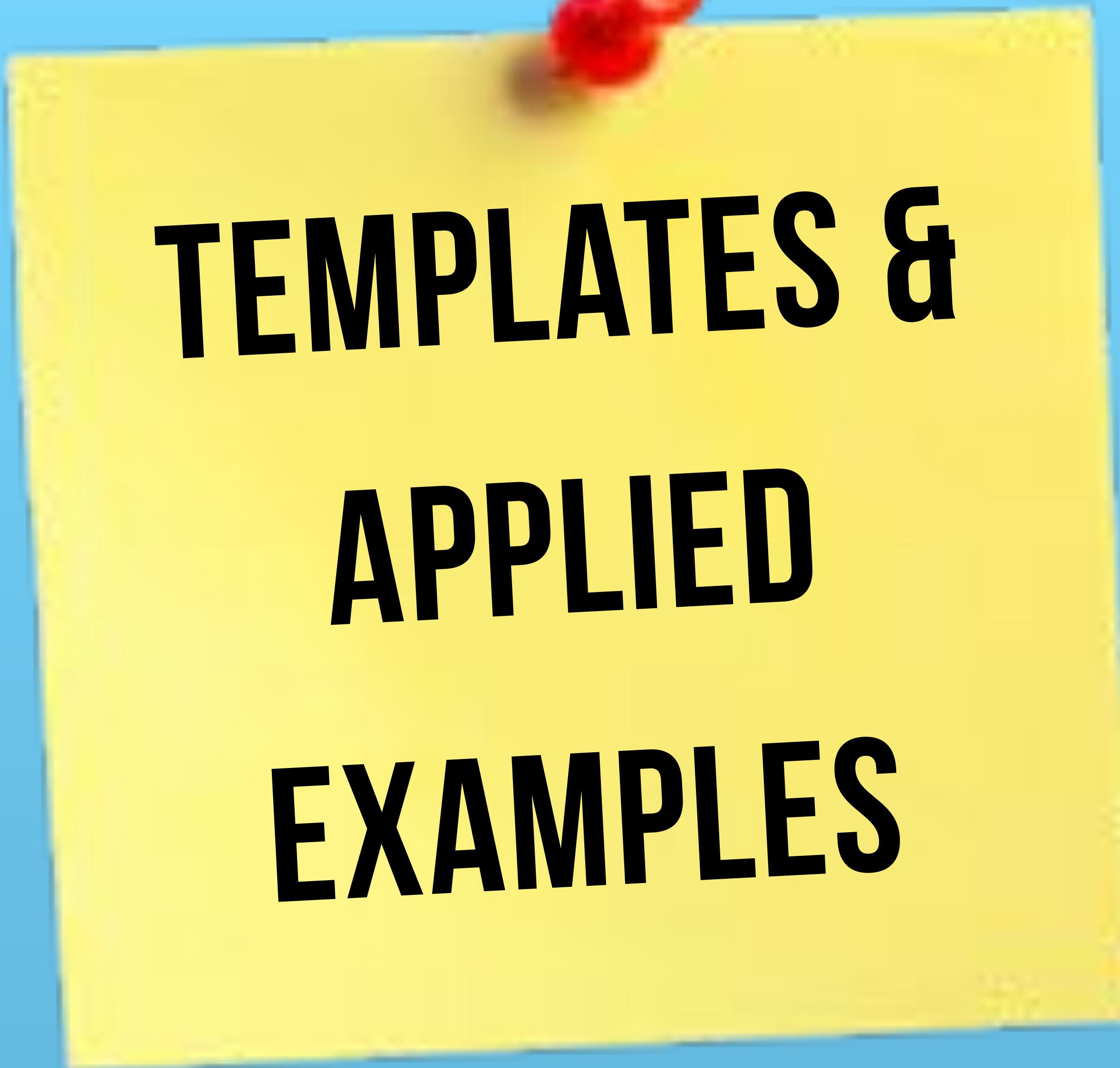
DESIGN CHECKLIST

DO I HAVE....

-  **core questions**
-  **thoughtfully made teams**
-  **video clips or prompt for intro**
-  **music for work time**
-  **team stations equipped with research materials**
-  **questions for the oral discussion**
-  **evaluation guidelines to share with the teams**

USE THIS CHECKLIST TO HELP YOU AS YOU DESIGN YOUR CURRICULUM.





TEMPLATES & APPLIED EXAMPLES

TEMPLATE

Give each team a poster board or whiteboard space to post up the following.

FACT FINDER

design questions that cause students to find 3 key facts related to the topic

factual
answer to
question #1

factual
answer to
question #2

factual
answer to
question #3

THEME FINDER

design questions that cause students to find 2 key themes related to the topic

theme #1

theme #2

TERM FINDER

have students define 3 key terms (people, vocab, places, events, etc)

key term 1 &
definition

key term 2 &
definition

key term 3 &
definition

INTERESTING FACT FINDER

ask students to identify a fact that was interesting or surprising

surprising/
interesting
fact

APPLIED EXAMPLE

1

For this 50 minute class, Mrs. Smith broke students into teams of 4. She decided to assign each team be either the revolutionaries, the loyalists, or the British empire. Since this class had 6 groups, there're two groups working on each role.

2

The teacher created the questions (on the next page) for each team. Before coming to class, the teacher set up a poster board station for each of the teams. The boards were all the same, but each group had a different set of questions.

3

She decided that instead of playing the matrix clip, she'd write the prompt on the board: "TODAY, you learn as fast as robots."

4

When students came in, she asked them what they thought the prompt meant. She announced the teams and handed them each their set of questions.

5

She instructed the students to write out the answers to all the questions, and then to use the responses to figure out which key concepts to put onto the different areas of the board. She also informed them that at the end there would be an oral quiz, and she would be collecting and grading their responses to the questions and their boards.

6

She sent the teams to their assigned stations, put a 30 minute time check on the board, and put on a Beatles soundtrack.

7

After thirty minutes had passed, she called the team back. She then conducted an informal oral quiz, where she picked random questions from the list and had students "buzz in" to respond. Since different teams worked on different questions, she used it as an opportunity for the students to explain what they'd learned.

8

After 10 minutes on the oral discussion, she asked the students to leave their boards, as she'd be coming around to grade them individually.

9

She assigned them their reading for homework, and told them to use the key questions they learned today to recognize which concepts are most important.

10

After the class, Mrs. Smith uses the toolkit assessment card to reflect on her own teaching during the period. She realizes she continually called on the same people, and decides to make an effort to call on the students who were

APPLIED EXAMPLE

REVOLUTIONARY TEAM QUESTIONS

1. Describe the development of the colonies up to this point. Think big picture.
2. Who are your main actors? What role do they serve and what are notable impacts they have made?
3. The year is 1770. What events in the last decade have led to your (the revolutionaries) discontent? What is your perspective?
4. In 1773, Samuel Adams and his group of men dumped 10,000 pounds worth of tea into the Boston Harbor, an event later known as the Boston Tea Party. What provoked the Boston Tea Party?
5. Were the Battles of Lexington and Concord necessary? Could military hostilities have been avoided?
6. What could King George III have done better?

LOYALIST TEAM QUESTIONS

1. Describe the development of the colonies up to this point. Think big picture.
2. Who are your main actors? What role do they serve and what are notable impacts they have made?
3. The year is 1770. What events in the last decade have led to your (the loyalists) discontent? What is your perspective?
4. How were you (the loyalists) regarded before and after the revolution? What happened after 1776? Why did you choose not to side with the revolutionaries?
5. What could King George III have done to win over the revolutionaries?

BRITISH EMPIRE TEAM QUESTIONS

1. Describe the development of the colonies up to this point. Think big picture.
2. Who are your main actors? What role do they serve and what are notable impacts they have made?
3. The year is 1770. What events in the last decade have led to your (the loyalists) discontent? What is your perspective?
4. How did British citizens view the revolution in America?
5. What were the impacts of losing the 13 colonies?
6. What could King George III have done better to strengthen his rule over the colonies and gain the revolutionaries' trust?

APPLIED EXAMPLE

board from a Revolutionary team

BACKGROUND FACTS

of the background facts you found, which three are most relevant?

after French-Indian War British were in debt and took it via taxes on the colonies

salutary neglect let the colonies be generally independent until this point

the colonies were not represented in British parliament
“No taxation without representation”

the British imposing many taxes:
-Sugar Act, Quartering Act, Stamp Act, Tea Act

the Enlightenment led many rev leaders to believe in limited government/consent of the governed

MAIN ACTORS

Pick three main actors from your side and explain their role in the revolution

John Adams: MA delegate in First Continental Congress, later VP then President

George Washington: Commander in Chief of revolutionary forces & later first President

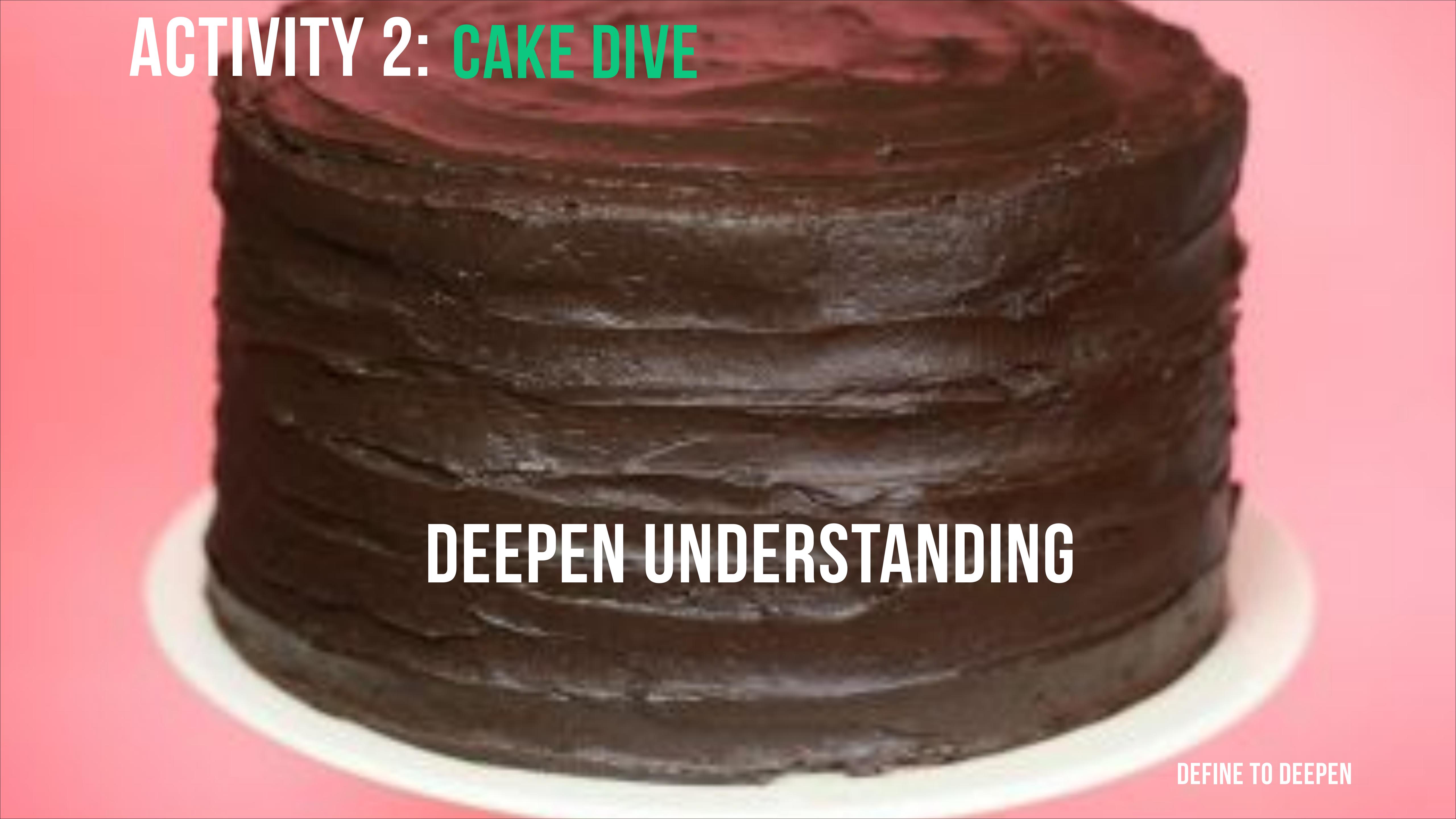
Thomas Paine: influential philosopher whose pamphlet Common Sense condemned monarchy

INTERESTING FACT FINDER

what was an interesting or surprising new fact you learned?

before the Revolution began, John Adams acted as defense attorney for the British soldiers involved in the Boston Massacre

ACTIVITY 2: CAKE DIVE

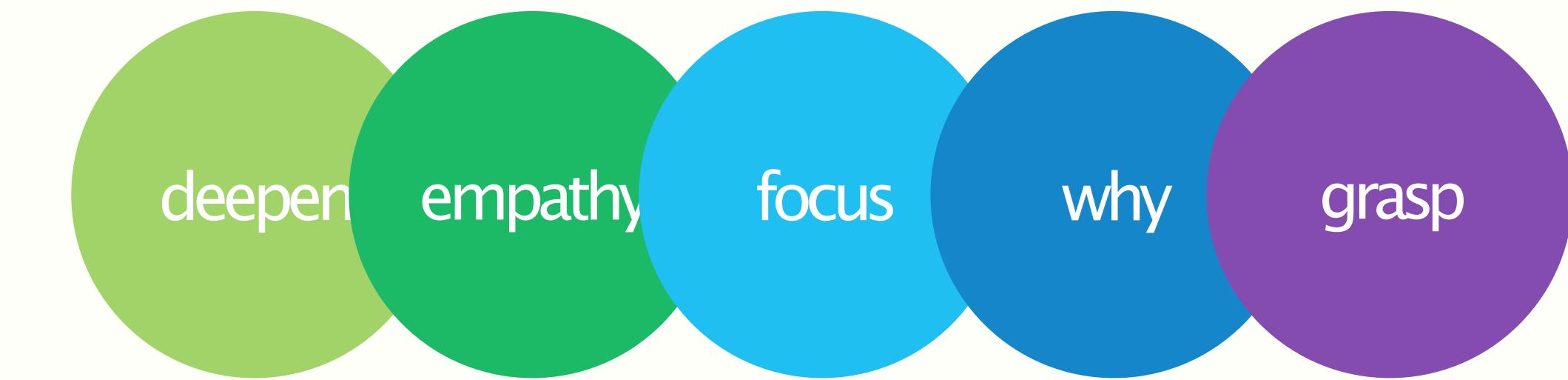
A large, round chocolate cake with white frosting is positioned in the center of the frame. The cake has several layers and is set against a pink background.

DEEPEN UNDERSTANDING

DEFINE TO DEEPEN

CAKE DIVE

- › LESSON DETAILS
- › PREP
- › PROCESS NOTES
- › FAQS
- › ASSESSMENT CARD
- › APPLIED EXAMPLE
- › DESIGN CHECK-LIST



THIS EXERCISE TEACHES DESIGN THINKING AS IT APPLIES TO GAINING DEEP INSIGHT INTO A PROBLEM, NEED, CHALLENGE, OR EVENT. THE GOAL IS TO ALLOW STUDENTS TO GAIN A DEEPER GRASP ON THE SUBJECT BY DEEPLY QUESTIONING WHY SOMETHING IS WHAT IT IS. THE CAKE DIVE INVOLVES CRITICAL THINKING AND GAINING AN IN DEPTH UNDERSTANDING OF A SUBJECT AT ITS CORE. THIS ACTIVITY LEVERAGES THE DESIGN THINKING VALUES OF EMPATHIZING AND FOCUSING IN ON UNDERLYING REASONS.

define to deepen

LESSON DETAILS

This activity teaches students important life skills: how to employ strategic thinking to get to the heart of a problem. Additionally, it allows you to gauge how deeply students understand not only the facts, but the logic behind them. Begin by posting the different "problem cards" around the room. The different cards have different problems that require knowledge of your subject. Whether they're a scientific equation, fact-based questions, reading-based prompts or life-skills scenarios, this activity will be effective.

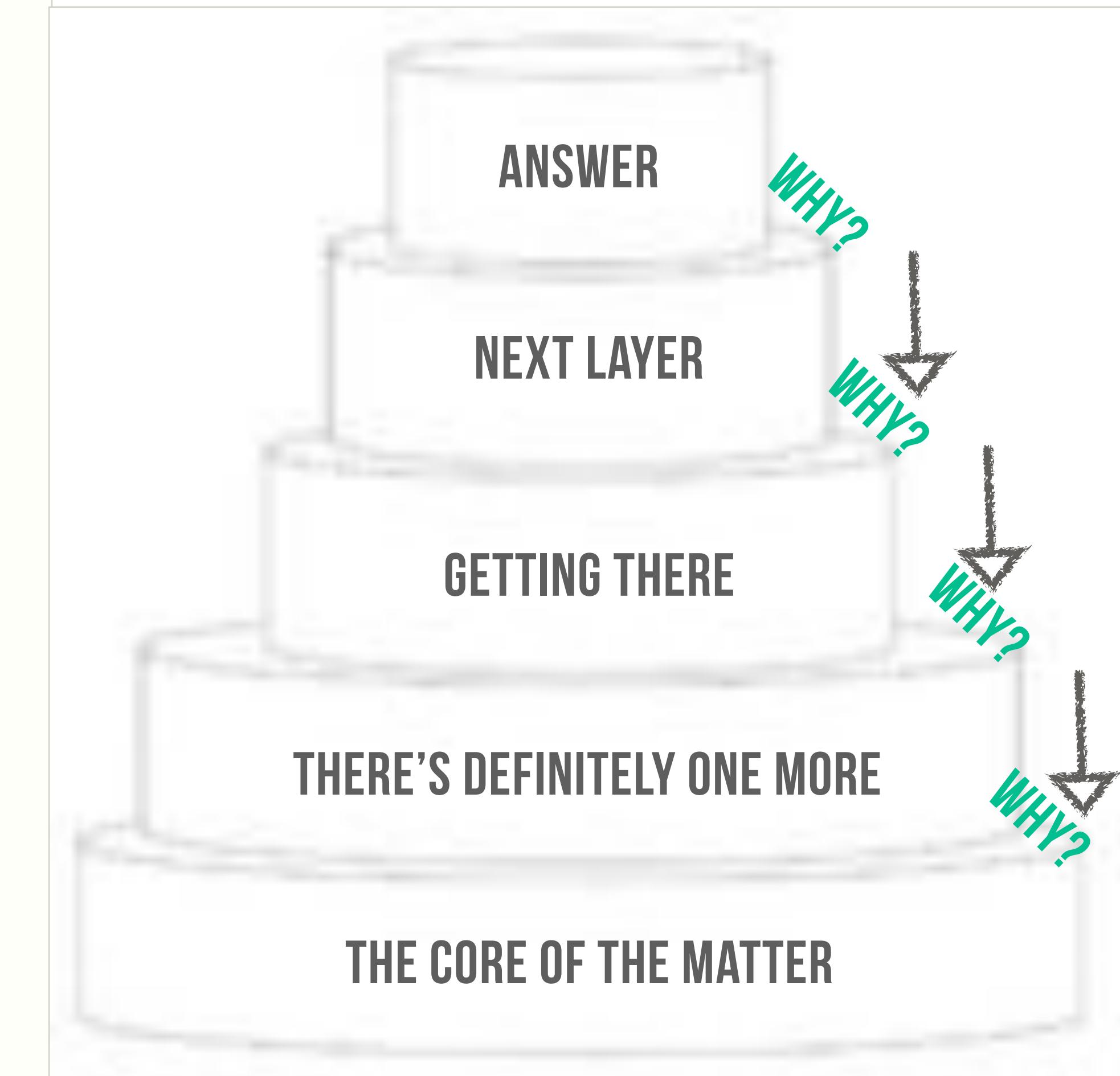
First, divide the students up into teams around the problem cards. Depending on the nature of the problem, teams may be large or small at your discretion. Teams can be solving the same problem, or various problems.

Once each team has a problem card, tell them that they have an allotted time limit to solve the problem. You decide what a reasonable time would be to solve the problem. Again, be conscious of the environment: what does the working space look like? Would playing music enhance the atmosphere? Would a visible timer help?

Once the time runs out, hand each student a layered cake handout. Have them put their first answer into the top layer of the cake, then as a team have them talk through the logic to get to the bottom layer of the cake.

CAKE DIVE

THIS TOOL CAN BE USED IN THE CLASSROOM SETTING OR BY STUDENTS ON THEIR OWN AS A WAY TO TEST HOW DEEPLY THEY UNDERSTAND A SUBJECT.



ACTIVITY PREP

SUGGESTED
RESOURCES

- printed out cards or handouts with the problems
- preselected music for the activity

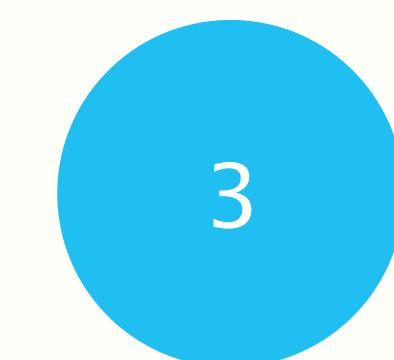
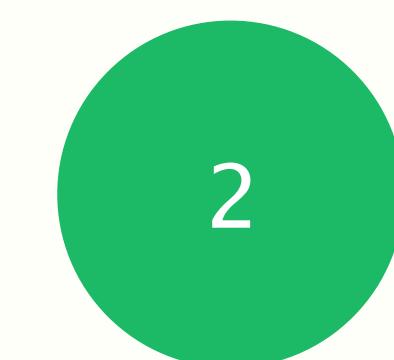
we know resources vary. The only material students truly need access to is the problem prompt you create- present it in the way best for you.

- have problem cards laid out for the number of teams you decide
- set up a timer or handwrite time checks on the board

space plays a huge role in the energy of the classroom. Encourage students to stand up as they discuss and play music to keep the energy engaging.

CURRICULUM SET-UP

decide how many problem cards you want to create. This is dependent upon your time constraints and how long each problem will take to solve.



create the problem card(s). They can be from our template, or you can practice your designer skills by making an exciting handout for each team with their problem on it.

make sure that the cake dive scaffolding is available for the students to work on after solving the problem.

decide on the time limits. Based on how long you think the problem will take to solve, set a time limit for the first solving phase. You'll have to be strict on this limit to have time to delve into the cake dive activity.

if you want to divide people into teams ahead of time, remember to prep it. We always suggest the four person sweet spot where possible.

PROCESS NOTES

THE QUESTIONS YOU DESIGN ARE KEY HERE. KEEP THESE GUIDELINES IN MIND:

1

look to your practice tests and general assessment tools: which problems require not just fact memorization but an understanding of the subject logic? These are the ideal types of problems.

2

try going through the layered cake yourself for the problems. Can you make it through all the layers? Adjust the size of the cake or the rigor of the problem to get to allow for them to provoke students to reach a point of deep clarity.

3

for some subjects it may work for this activity to be done individually, however we encourage you to make it collaborative. Not only will it teach valuable teamwork skills, but it exposes students to logic sets and problem approaches different from their own.

FAQS

WE LOVE QUESTIONS. IF THESE DON'T DO IT FOR YOU, FEEL FREE TO CALL OUR 24 HOUR HOTLINE AT (707) 820-REVV

1

how is this different from a practice test?

we view this as the new generation practice test: it tests for a deeper knowledge than just rote memorization and forces students to reflect on understanding gaps.

2

does this have to be done in class?

nope. Having students do this on their own as homework is still a useful tool, but we encourage the valuable added lessons that come from collaboration.

3

do I have to print layered cake copies for everyone?

we'd never make you use so much paper and ink. Feel free to print them if you'd like, send the handout electronically, or draw the diagram on the board for students to copy down instead.

ASSESSMENT CARD

PERSONAL ASSESSMENT

ASK YOURSELF THE FOLLOWING TO CHALLENGE YOURSELF AS A DESIGNER AND EDUCATOR.

- 1 did my questions challenge the students' core understanding or just their rote memorization?
- 2 was I a helpful resource during the initial problem solving phase?
- 3 did I notice any patterns regarding students logic processes during the cake dive?
- 4 what was the most positive thing I did during this exercise, and how can I amplify that variable?
- 5 what was the most negative thing I did during this exercise, and how can I get rid of that variable?

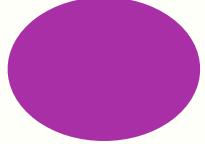
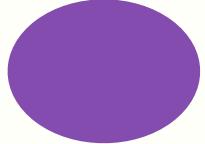
STUDENT ASSESSMENT

WE RECOMMEND USING THESE AS A GUIDELINE FOR GRADING, AND SHARING THEM AT THE START WITH THE STUDENTS.

- 1 team grade: was the whole team engaged in the cake dive process?
- 2 team grade: was the team able to use logic to dive through the layers of the cake?
- 3 individual grade: was the initial problem answer correct?

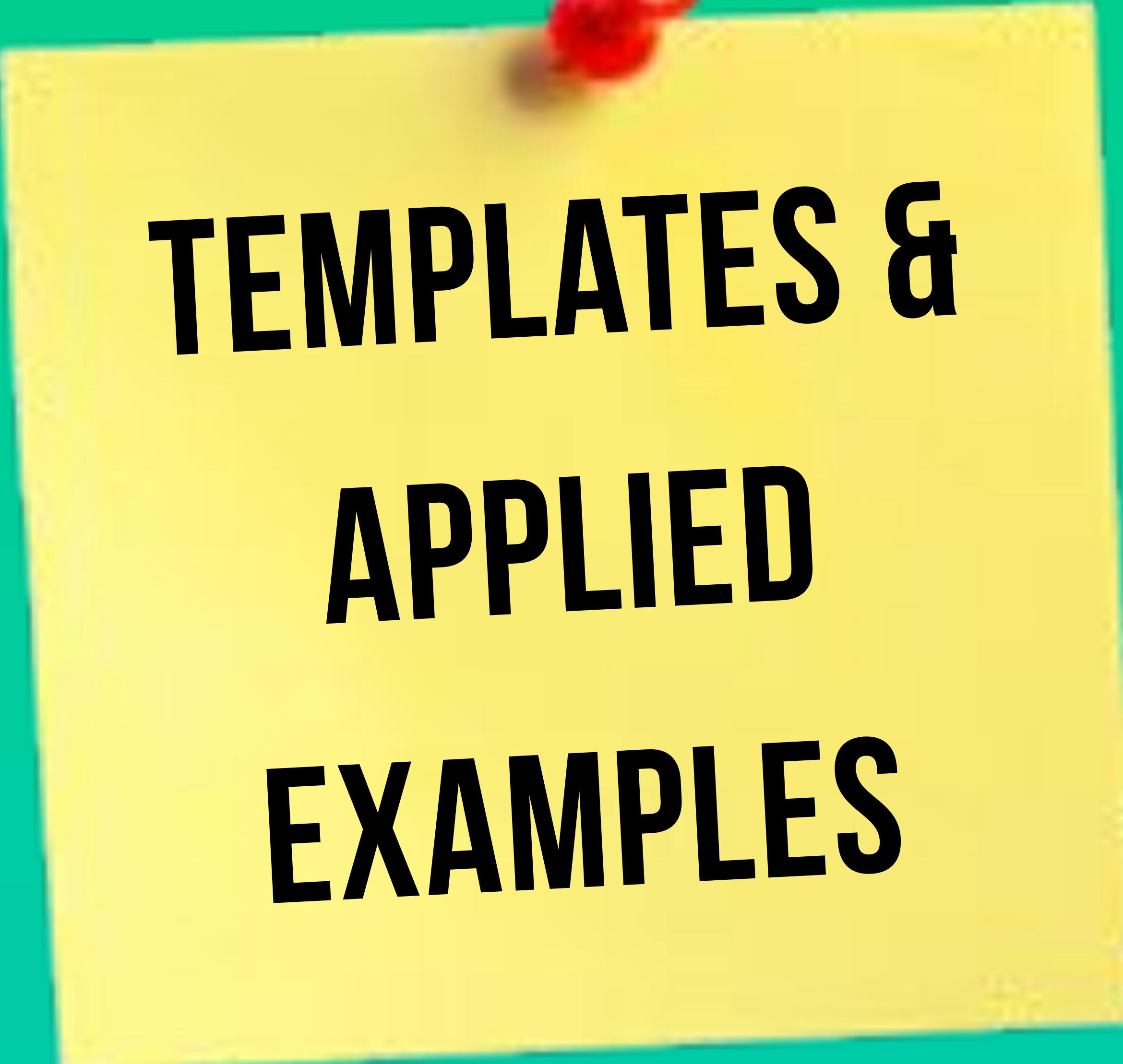
DESIGN CHECKLIST

DO I HAVE....

-  **problem cards**
-  **thoughtfully made teams**
-  **a way for students to use the cake dive format**
-  **music for work time**
-  **time limits for the problem solving phase**
-  **a plan for assessing (group debrief, collect offline?)**
-  **evaluation guidelines to share with the teams**

USE THIS CHECKLIST TO HELP YOU AS YOU DESIGN YOUR CURRICULUM.





A yellow sticky note with two red pushpins at the top center. The note has rounded corners and a slightly textured appearance. It contains the following text:

**TEMPLATES &
APPLIED
EXAMPLES**

APPLIED EXAMPLE

1

After the last class period where students launched into Rapid Research, Mrs. Smith is ready to reinforce some key concepts.

2

Mrs. Smith wants to give her normal lecture on the American Revolution. Since it's still early in the unit, she is going to pair this with the low time commitment of the cake dive.

3

For the forty-five minute class, she starts with her normal twenty-five minute lecture on the revolution.

4

She then writes out two questions on the board. After she graded the rapid research boards and handouts last class, she realized students struggled a bit with the causes of the Revolution. As a result, she gears the questions towards this.

5

She has two handouts ready for each student. Each handout has the cake dive scaffold and one of the prompts on it. Mrs. Smith decides that instead of teams, she'll do one of the questions together as the class and assign the other as homework.

6

While doing the activity as a class, she pushes them to really get at underlying themes, asking "why is this important?" as they dive from layer to layer. She sets a precedent for how to do the activity.

7

As the class comes to a close, she gives out the second handout and assigns students to do it individually for homework. She also makes the cake dive scaffold available on their class website, and offers extra credit for anyone who crafts a well executed one on their own American Revolution question.

8

After the class, Mrs. Smith uses the toolkit assessment card to reflect on her own teaching during the period. She realizes she continually called on the same people, and decides to make an effort to call on the students who were less engaged.

define to deepen

APPLIED EXAMPLE

what was the
impact of the
Declaratory Act of
1766?

reaffirmed Britain's right to
pass legislation regarding the
American colonies anytime

Parliament used it as
justification for levying various
taxes in the Townshend Act

Led to anger over taxation without
representation and eventually the Boston Tea
Party

After the Tea Party, the British used it to back the Intolerable
Acts and the Coercive Acts

It repeatedly took freedom away from the colonists, bringing them
closer to rebellion

why is this
important?

done on the
whiteboard

CAKE DIVE

QUESTION/PROMPT TO ANSWER:

Were Americans open to reconciliation as late as 1775?

START WITH THE ANSWER, THEN ASK YOURSELF WHY THAT IS IMPORTANT TO UNDERSTAND THE UNDERLYING CONCEPT.

ANSWER

NEXT

LAYER

GETTING

THERE

ONE

MORE

THE

CORE

Mrs. Smith
gave this as
homework

A photograph of a person's lower legs and feet walking barefoot on a sandy beach. The person is wearing dark trousers and sandals. Their reflection is clearly visible in the wet sand. The background shows the ocean waves.

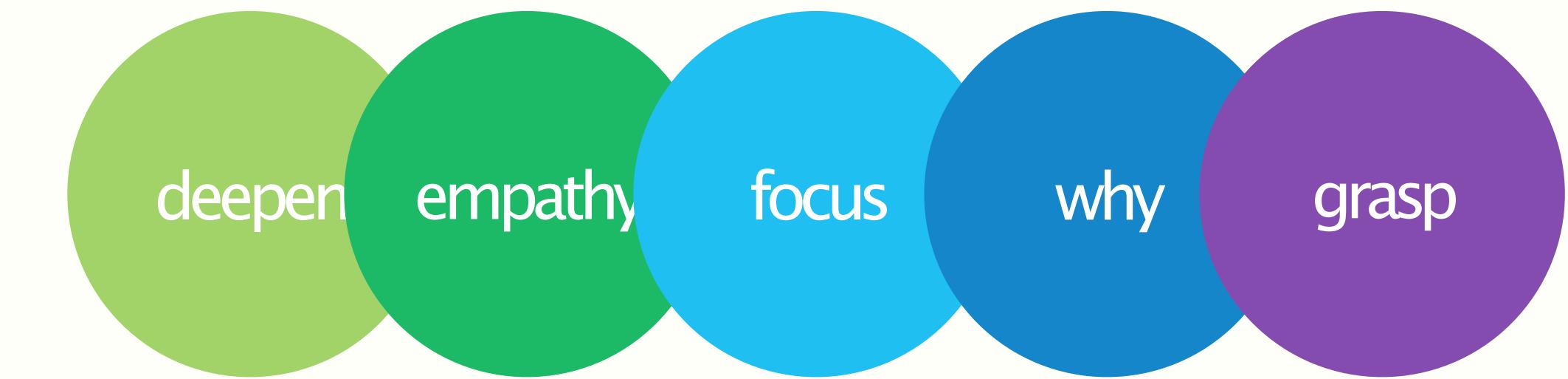
ACTIVITY 3: CREATIVITY SPARKS

ENGAGE VIA
CREATIVITY

IDEATE TO ANALYZE

CREATIVITY SPARKS

- › LESSON DETAILS
- › PREP
- › PROCESS NOTES
- › FAQS
- › ASSESSMENT CARD
- › APPLIED EXAMPLE
- › DESIGN CHECK-LIST



THIS EXERCISE TEACHES DESIGN THINKING AS IT APPLIES TO ENGAGING IN CREATIVE CRITICAL THINKING. THE GOAL IS TO ALLOW STUDENTS TO EXERCISE THEIR DEEPER UNDERSTANDING OF A SUBJECT AND ENGAGE IN HIGHLY VALUABLE CREATIVE THOUGHT PROCESSES. CREATIVITY SPARKS INVOLVES CRITICAL THINKING, ANALYZING AND STRATEGY. THIS ACTIVITY LEVERAGES THE DESIGN THINKING VALUES OF CREATIVITY AND INNOVATION.

LESSON DETAILS

This activity provides a creative framework for students to approach analyzing subjects. More than just learning the information and the logic behind it, here they begin to develop critical skills to draw conclusions, suggest strategies and generate ideas.

If you ran the cake dive activity before, you can use that framework as a starting point and dive straight into phase 2 of this activity. If you haven't done the cake dive activity, then you'll start with phase 1.

Phase 1: create problem cards (see the cake dive activity for more in depth details) on your subject that allow students to solve a specific problem. Take the answer and repeatedly ask the students to ask themselves why that is the answer, filling out the cake dive scaffolding. This can be done as homework before class, or during class if time permits.

Phase 2: create a forum for students to creatively analyze the situation. Have them reflect on their cake dive scaffold that they've previously filled out, looking at the bottom layer. Ask them to take that layer response and reframe the key insight or fact there. Have the students break into teams around the insights (the same teams as worked on the scaffolding if it was done in class, otherwise divide at your own discretion.)

Next, you begin tossing creativity sparks at them. Creativity sparks are

variables that require students to discuss and analyze the effect that a specific element would have on the subject they are studying. You can make any creative spark that you want, or use some from our included template. Have teams brainstorm possibilities and for each idea decide upon an idea. To guide the selection process, you may offer for the students to narrow it down to the "most interesting" or the "most likely to actually work". At the end, lead a debrief with the whole class to analyze the connections between the subject and life. Also take the opportunity to build creative confidence amongst your students.

ACTIVITY PREP

SUGGESTED
RESOURCES

CLASSROOM
SET-UP

- printed out cards or handouts with the creativity sparks
- cake dive from previous activity, or new cake dive
- preselected music for the activity

we know resources vary. The only material students truly need access to is the problem prompt you create-present it in the way best for you.

- have spaces for the teams to talk and brainstorm
- set up a timer or handwrite time checks on the board

space plays a huge role in the energy of the classroom. Encourage students to stand up as they discuss and play music to keep the energy engaging.

CURRICULUM SET-UP

- 1
- 2
- 3
- 4

decide how many creativity sparks you want to create. This is dependent upon your time constraints, though you generally want to allot about 10 minutes per spark.

create the creativity sparks. You can stick with the templates or design your own! The sky is the limit. Great sparks are open enough to unleash ideas, but narrow enough to promote focus.

if you haven't done the cake dive, then prep phase 1. For this you'll need the cake dive template, and either class time or homework time for the activity.

if you want to divide people into teams ahead of time, remember to prep it. While this activity can be done individually or in any size team, we always suggest the four person sweet spot where possible.

PROCESS NOTES

THE QUESTIONS YOU DESIGN ARE KEY HERE. KEEP THESE GUIDELINES IN MIND:

1

when designing sparks, try and exercise your own creativity. This is an opportunity for you to throw in the wacky scenarios you may have always thought about in the back of your head, or for you to push yourself out of your comfort zone.

2

are the creativity sparks I chose a little wild, but still doable?

3

we highly recommend an in class debrief followed by a personal written reflection as the assessment tool. It will keep the energy flowing and excitement going, and allow the groups to really make analytic connections.

FAQS

WE LOVE QUESTIONS. IF THESE DON'T DO IT FOR YOU, FEEL FREE TO CALL OUR 24 HOUR HOTLINE AT (707) 820-REVV

1

can this be applicable to theoretical questions?
absolutely. Creativity sparks can ignite powerful analysis and discussion surrounding any topic.

2

do we really have to do the cake dive to do this?
we highly recommend the cake dive so students can exercise critical thinking in analyzing a fundamental problem, however you could just give students a prompt of your choice and jump straight into the sparks.

3

how can I make this even more engaging?
really spend some time going through the brainstorming rules with the class, set up some great music and keep the energy high.

ASSESSMENT CARD

PERSONAL ASSESSMENT

ASK YOURSELF THE FOLLOWING TO CHALLENGE YOURSELF AS A DESIGNER AND EDUCATOR.

1

did my work from phase 1 or the cake dive reflect positively during this exercise?

2

was I able to create an energetic environment to match the mood of the activity? Why/Why not?

3

did I notice any patterns about how comfortable or uncomfortable students felt expressing themselves creatively?

4

what was the most positive thing I did during this exercise, and how can I amplify that variable?

5

what was the most negative thing I did during this exercise, and how can I get rid of that variable?

STUDENT ASSESSMENT

WE RECOMMEND USING THESE AS A GUIDELINE FOR GRADING, AND SHARING THEM AT THE START WITH THE STUDENTS.

1

did the student participate in the discussion?

2

does the reflection demonstrate an understanding of the underlying concept or problem?

3

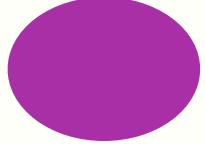
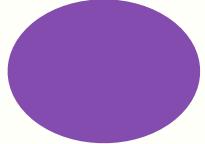
does the reflection demonstrate an ability to creatively approach the issue?

4

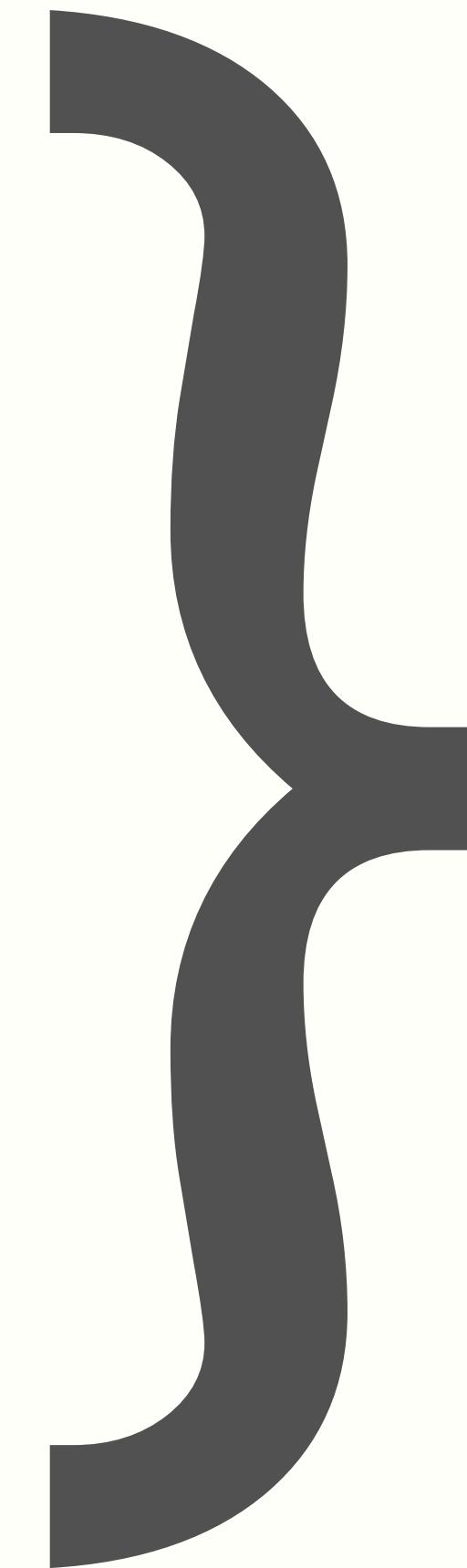
does the reflection demonstrate an ability to analyze connections?

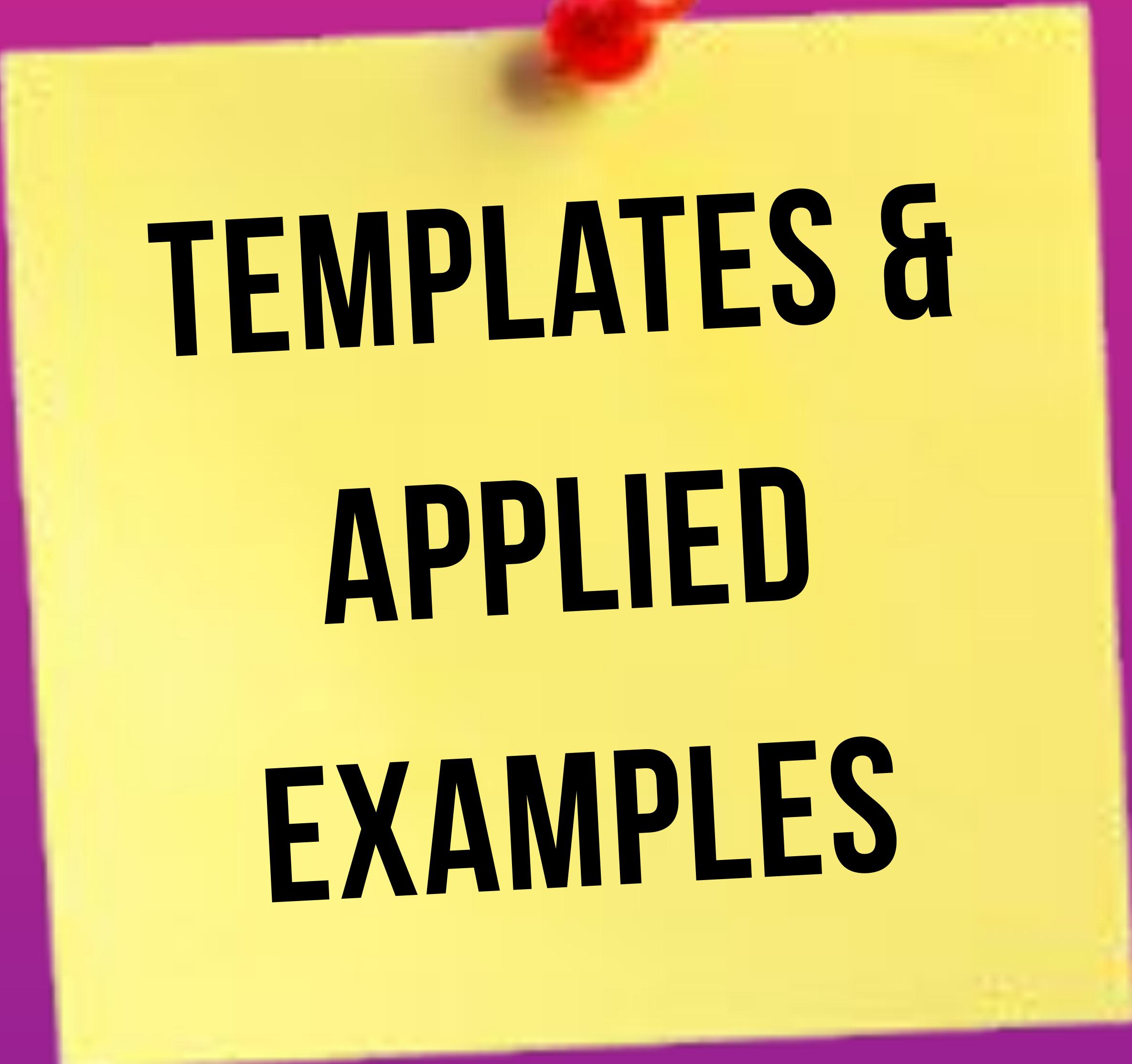
DESIGN CHECKLIST

DO I HAVE....

-  problem cards or **phase 1 completed**
-  thoughtfully made **sparks** written/chosen
-  **materials/stations** for each team to discuss at
-  **music** for work time
-  **time limits** for each spark and the debrief
-  **debrief prompts** and a format to engage everyone
-  **evaluation guidelines** for homework reflection

USE THIS CHECKLIST TO HELP YOU AS YOU DESIGN YOUR CURRICULUM.





TEMPLATES & APPLIED EXAMPLES

CREATIVITY SPARKS

Choose from the list of sparks below (or design your own!).

GRADE K-1 RECOMMENDATIONS

- If you were insert character or object from the topic here what would you want most right now?
- Imagine you're building a game about or a toy insert character or object from the topic here. How would it look? Why?
- Think about your favorite book. Imagine if insert character or object from the topic here were in the story. What would the story be like now?

GRADE 5-7 RECOMMENDATIONS

- An alien race is taking over Earth. Luckily, there's a way to save the planet: you must explain to these insert your subject here- loving aliens how your subject affects everyday life on Earth, making it worth preserving.
- You're a super secret spy agent called in to give the President a briefing on insert your subject here. But since the President is very busy, you only have 45 seconds.
- You've been hired by the school to use social media to make insert your subject here "cool". How will you do it?

GRADE 2-4 RECOMMENDATIONS

- The President of the United States just called to ask for your help. He needs you to find a way to use insert character or object from the topic here to make America better. How will you do it?
- Imagine that instead of buying things with money, you could only buy things if you could explain insert character or object from the topic here. How would you teach it to other people so that they could buy things?
- You found a time machine! Now you can go back to when insert character or object from the topic here was created/discovered/founded/living. What's it like?

GRADE 8-12 RECOMMENDATIONS

- You've been hired by ed tech global to make your subject more relevant to the rising generation by leveraging technology, social media and/or gaming. What will you do?
- We've been launched 150 years into the future. What does this insight look like now?
- You just received \$1 million dollars to make insert your subject here widely known, understood and cool to learn. How will you use the money to do that?

BRAINSTORMING RULES

THE ABILITY TO BRAINSTORM IS IMPORTANT IN ALL FORMS OF PROBLEM SOLVING. TEACH STUDENTS HOW TO DO IT RIGHT BY FOLLOWING THE FEW SIMPLE GUIDELINES BELOW.

no no's

reserve judgement.
Make saying "no"
forbidden. Instead,
have students say
"yes and"

be creative!

try to think out of the
box. Encourage
students to be fearless
in their ideas.

headline

present the
headline of your idea,
not the whole article!

convo by convo

stay on topic! Have
students self-regulate
to make sure they're
on track.

write it down

write down any and all
ideas, even if another
team member came up
with it

FILL OUT THE FOLLOWING TO HELP YOU CREATE DEBRIEF QUESTIONS

GETTING A PULSE ON THE CLASS

how did that feel?

1

No matter what the age group, gauge the reactions of the class. Popcorn style works well here, or you can call on each team individually.

what was the hardest part?

2

This is a good opportunity to discover what concepts the class might be struggling with.

what was the most fun idea you came up with?

3

Give the students the fun opportunity to show off their creativity.

RE-ENFORCING LESSON LEARNINGS

1

what did you learn about the topic?

You can shape the discussion to focus on a topic you want to re-enforce, or take any learnings they mention and reinforce the concept they're bringing up.

2

is there anything about the topic you realized you didn't understand?

Brainstorming and explaining often expose any holes in students' knowledge.

3

why do you think brainstorming sessions like this are important?

Take a chance to talk about the value of being able to think through problems and come up with solutions on tests, during work and during everyday life.

APPLIED EXAMPLE

1

For this forty-five minute class, Mrs. Smith decides to get creativity flowing and work on important critical thinking skills. To start, she chooses a couple creativity sparks.

2

To get ready for class, she prepares a fifteen minute lecture on the reading. Next she picks teams. She decides to use different teams from the first activity.

3

Like Rapid Research, she sets up a station for each team in the classroom with either paper, whiteboard space, or a blank poster board.

4

Once class starts and her lesson is through, she announces that the class is going to redesign the way we learn about the American Revolution. She puts a ten minute timer up and announces the first prompt (next page).

5

Mrs. Smith then announces that at the end of the ten minutes, the teams need to have an idea written out before waiting for further instruction. She then announces the team, sends students to their stations, puts on a "hits of the 90s" playlist and starts the timer!

6

With two minutes left in the timer, Mrs. Smith announces for the teams to start writing down their most interesting idea if they haven't already.

7

Once ten minutes have passed, Mrs. Smith tells them to hold onto their ideas. She then announces they're going to repeat the process with a second creativity spark (next page), writes the prompt on the board and puts another ten minute timer up. While students are working, she clears out a space for them to all sit in a circle during the debrief.

8

After the final timer goes off, Mrs. Smith calls all the students in for a debrief. She uses the debrief template attached. Based off of the assessment card from the last activity, she's going to make a more conscious effort to call on various students. One technique she tries is going around in the circle and have everyone describe in one word how that activity went for them. She uses this as a springboard to engage with some of the students who speak up less.

9

Mrs. Smith used the assessment card to comment on the teams ideas and to reflect on her performance.

APPLIED EXAMPLE

done on the whiteboard

time remaining: 10 minutes

spark 1: You're a super secret spy agent called in to give the President a briefing on the American Revolution. But since the President is very busy, you only have 45 seconds.

spark 2: You've been hired by to use social media (Games, Facebook, Twitter, Instagram, SnapChat, websites) to make the American Revolution "cool". How will you do it?

APPLIED EXAMPLE

spark 2: use social media to make the American Revolution "cool".

Farmville-like game where you have to take care of your colony

Revolutionary War video game

Everyone change their Facebook profile pictures to the same famous picture of American Revolution with a link to an education website

an interactive book where you "choose the next move" to try and change what happened in the war

"fun fact app" where everyday you get a random fun fact about the American

A twitter that tweets daily from the perspective of Ben Franklin. We could make one for Washington, Adams and King George too

chosen idea - most likely to succeed
make twitter accounts for Ben Franklin, George Washington and King George III & have them tweet interesting facts about the Revolution but with funny stuff too

example of student poster board

a youtube channel with videos about the Revolution

A dynamic photograph of a skateboarder performing a trick on a ramp. The skateboarder is wearing blue jeans and white sneakers. The board is black with yellow wheels. The background is blurred, suggesting motion. The overall mood is energetic and focused.

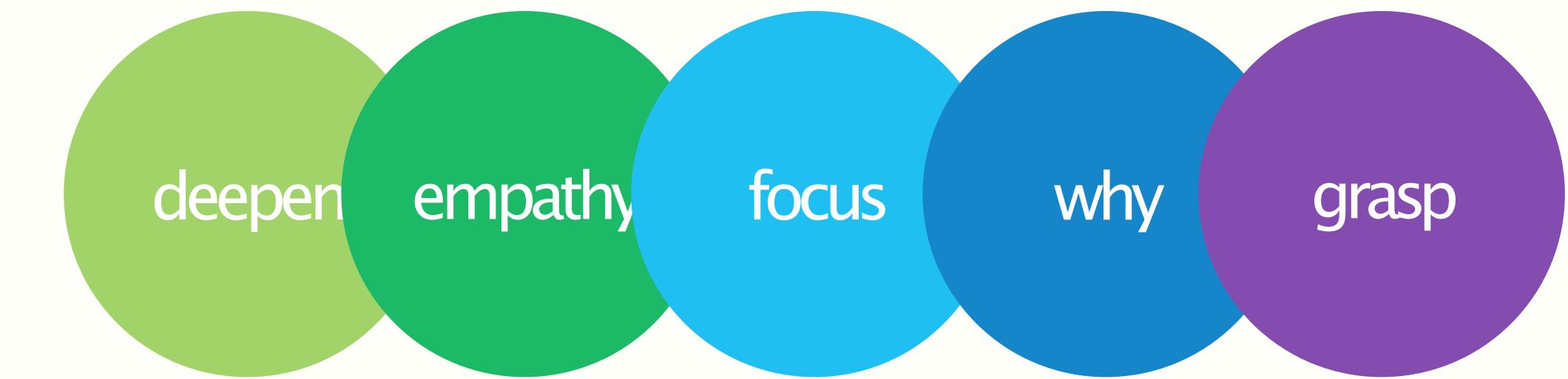
ACTIVITY 4: PROMO PROTOTYPING

LEARN THROUGH
EXPRESSION

PROTOTYPE TO ASSESS

PROMO PROTOTYPING

- › LESSON DETAILS
- › PREP
- › PROCESS NOTES
- › FAQS
- › ASSESSMENT CARD
- › APPLIED EXAMPLE
- › DESIGN CHECK-LIST



THIS EXERCISE TEACHES DESIGN THINKING AS IT APPLIES TO CREATION AND EXPRESSION. THE GOAL IS TO ALLOW STUDENTS TO SHOWCASE THEIR KNOWLEDGE OF A TOPIC BY DESIGNING SPECIFICALLY FOR IT. THIS PHASE INVOLVES CRITICAL THINKING A DEEP UNDERSTANDING OF THE TOPIC, TEAMWORK, PLANNING, AND CREATIVITY. THIS ACTIVITY LEVERAGES THE DESIGN THINKING VALUES OF CREATING AND STORYTELLING, AND OFFERS YOU A WAY TO ASSESS STUDENTS ON OVERALL UNDERSTANDING OF A TOPIC.

LESSON DETAILS

If you use this toolkit as a sequence of activities, at this point students have a knowledge of core facts about the topic, an understanding of the underlying logic, and an idea generated from a rich analysis of the topic's relevance. This next step helps concrete understanding through hands-on experience.

Promo-Prototype helps the students role-play and assume the perspectives they are representing. This method of interactive learning hones students' ability to narrate stories and can demonstrate their level of understanding on a school topic. Other than just combing through the facts on a topic, students are asked to critically infer relationships among the facts. The objective is to help students develop multiple perspectives on a subject. In turn, the exercise strengthens students' ability to actively process, conceptualize, analyze, synthesize, and apply the information to reach an answer or conclusion. The goal of the exercise is to bolster students' presentation and persuasion skills, while also concreting knowledge in an assessable way.

The activity begins by breaking students into groups of four to six and assigning each team a "viewpoint" generated from the creativity spark exercise reflections. If you have not done the previous exercise, then develop a set of creative prompts for students to explore surrounding your topic. If it's history, try to set up a simulation experience with real

characters; if it's a scientific concept, try and set up a context where that concept would apply to "the real world"; if it's a mathematical concept try to set up a context where something would depend upon understanding it.

Whatever the prompt, start by asking students to engage in a brief discussion around what they've learned so far. Be it through the previous exercises or from your own set of activities, ask students to reflect on the evolution their understanding of the topic has gone through. You can choose to have students capture these responses on paper or just through discussion.

After reflection, ask each group to create a promotional visual aid of an art piece, a video, an interactive performance, a graph, a story, a speech, a slideshow, or another pre-approved format. The goal of the aid is to persuade the audience to consider each groups' assigned viewpoint. Either at the end of the class period or as a final assessment in its own stand alone period (dependent upon time and availability of resources to make the aids), have each team present to the instructor and the class. During presentations, have students individually fill out a form like the one attached for each of the presenting teams.

ACTIVITY PREP

- › printed out cards or handouts with the ideas
- › self-designed guidelines for the visual aids
- › preselected music for the aid designing time
- › popcorn for the presentations!

we know resources vary. The only material students truly need access to is their team's idea they're representing- present it in the way best for you.

- › have spaces for the teams to discuss, brainstorm, and create
- › position the class "theater style" during presentations

space plays a huge role in the energy of the classroom. Encourage students to use any resources available to them to dive into the designing process.

SUGGESTED
RESOURCES

CLASSROOM
SET-UP

CURRICULUM SET-UP

if you've followed the sequence of activities in the eBook, this exercise should take little prep. Boil down ideas from the creativity sparks reflections to the ones you think are most relevant and interesting.

either type up, write out or somehow prepare to display the ideas you chose. You may want to give every team the same idea, give them the idea their team has been following all along, or mix up the teams



create a set of guidelines for the visual aids that fit within your boundaries. We encourage leaving a wide range of possibilities open to allow an opportunity for creativity. To do this effectively, create a rubric for how

prep some guiding questions for the initial debrief. "Reflect on the journey to this point" may be open enough for some groups, while others may need to specifically be asked to reflect on each activity. The goal is to reinforce drawing connections between facts, logic, and analysis.

PROCESS NOTES

THE QUESTIONS YOU DESIGN ARE KEY HERE. KEEP THESE GUIDELINES IN MIND:



encourage students to creatively express themselves through the visual presentation, even if that may push you out of your assessment comfort zone.



this activity will be as fun and important as the weight you put on it. Position it as the capstone to a unit, an opportunity for creative sharing and important and the air will be buzzing with nervous and excited energy.



while every schedule varies, we recommend spending an entire class period or equivalent doing the initial group reflection working on the visual aid. Then, launch into presentations in a separate class section where you can control the mood and expect better quality projects.

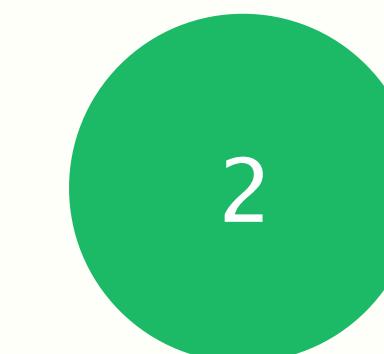
FAQS

WE LOVE QUESTIONS. IF THESE DON'T DO IT FOR YOU, FEEL FREE TO CALL OUR 24 HOUR HOTLINE AT (707) 820-REVV



what if none of the creativity spark reflections work as prompts?

reflect on where the dead ends are, and try to design your own thought provoking prompts.



can this be done individually vs. in teams?
we get that issues come up with teams grades, but in higher education and the job world, collaboration is the basis for success and preparing students for this is hugely important.



what if I don't have time to do this over two periods?
no worries. Limit the initial group discussion time and narrow down the types of visual aid options to quick to make options that they can do in class: drawings or diagrams, unedited videos, skits or pictures.

ASSESSMENT CARD

PERSONAL ASSESSMENT

ASK YOURSELF THE FOLLOWING TO CHALLENGE YOURSELF AS A DESIGNER AND EDUCATOR.

1

did my work earlier in the unit/in the earlier exercises reflect positively during this exercise?

2

was I able to create an energetic environment to match the mood of the activity? Why/Why not?

3

did I notice any patterns about how comfortable or uncomfortable students felt during group presentations?

4

what was the most positive thing I did during this exercise, and how can I amplify that variable?

5

what was the most negative thing I did during this exercise, and how can I get rid of that variable?

STUDENT ASSESSMENT

WE RECOMMEND USING THESE AS A GUIDELINE FOR GRADING, AND SHARING THEM AT THE START WITH THE STUDENTS.

1

team: do the students show an understanding of the logic behind the initial key subject insight?

2

team: do students show a grasp on clear, foundational facts related to the topic?

3

team: does the visual aid reflect a high level of effort? Is the presentation well thought out, clearly planned, and practiced?

4

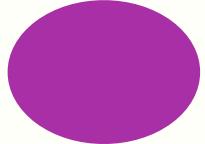
team: does the visual aid show a grasp on the topic thesis?

5

*We recommend incorporating participation in the next exercise, fearless feedback, into students' individual grades.

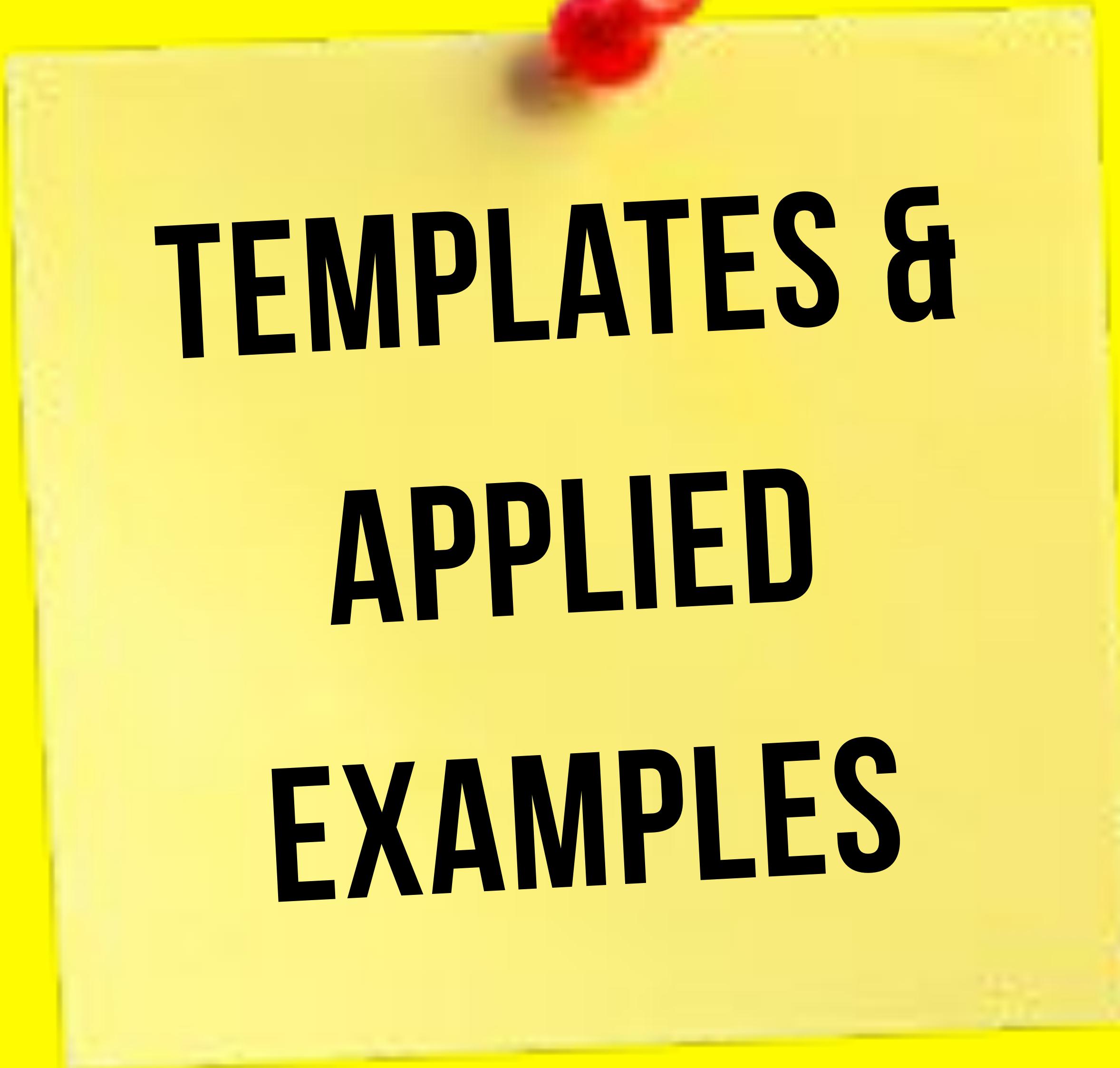
DESIGN CHECKLIST

DO I HAVE....

-  **topic prompts** from the creativity sparks or other
-  **debrief prompts** for initial group reflection
-  **materials** for prototyping
-  **individual feedback cards** for presentation audience
-  **guidelines** for visual aids
-  **thoughtfully made teams**
-  **presentation rubric** for students

USE THIS CHECKLIST TO HELP YOU AS YOU DESIGN
YOUR CURRICULUM.





TEMPLATES & APPLIED EXAMPLES

PROMO PROTOTYPING

Choose which “visual aids” you want your students to create from the list below (or design your own!).

GRADE K-1 RECOMMENDATIONS

- drawing:** Create a drawing that shows what you've learned!
- storybook:** (teacher) Write out a story sequence, and have students draw accompanying illustrations.
- poem:** (teacher) Pick a poem or write one on the subject and have students practice, memorize and present it.

GRADE 5-7 RECOMMENDATIONS

- video:** Create a 2 minute video that tells a story: it could be about a key concept, person, term or element of your topic.
- role-play:** Take on a character. It can be a historical person, object, or key term. Dress up and give a presentation to the class in character!
- TED Talk:** Design a 9 minute talk, like the famous TED talks, that focuses on one, interesting part of your topic. Either record it before hand or present it live to the class!

GRADE 2-4 RECOMMENDATIONS

- skit:** Write a skit with your team about something you learned. Be sure to have characters and a beginning, middle and end. Then, present to the class!
- role-play:** Take on a character. It can be a historical person, object, or key term. Dress up and present to the class!
- artwork:** Create a piece a drawing, painting, sculpture or other piece of art. Write a few sentences about what it means, and present to the class!

GRADE 8-12 RECOMMENDATIONS

- video:** Create a 2 minute video that tells a story: it could be about a key concept, person, term or element of your topic.
- infographic:** Create an graphic about your idea/topic. Present it to the class. You can make it by hand, or use: vizualize.me; easel.ly; piktochart.com
- TED Talk:** Design a 9 minute talk, like the famous TED talks, that focuses on one, interesting part of your topic. Either record it before hand or present it live to the class!

PROMO PROTOTYPING

student grading rubric: choose which grading format is applicable

PERSONAL GRADE

Fill in box with *needs improving (NI)*, *acceptable (A)*, or *extraordinary (E)*

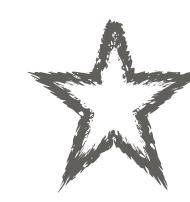
effort: is it clear that the student put time and thought into making the best visual aid possible?

creativity: is the content put together in an interesting way?

presentation: was the presentation clearly thought out, rehearsed, and well executed?

understanding: does the presentation reflect a clear understanding of the topic/subject?

feedback: did the student thoughtfully fill out the feedback cards while watching the other presentations?

 comments (*teacher*): write additional direct feedback on the presentation to use during fearless feedback

TEAM GRADE (IF APPLICABLE)

Fill in box with *needs improving (NI)*, *acceptable (A)*, or *extraordinary (E)*

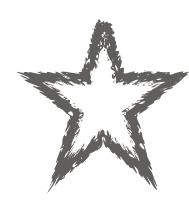
collaboration: is it clear that every team member added value to the end product?

creativity: is the content put together in an interesting way?

presentation: was the presentation clearly thought out, rehearsed, and well executed?

understanding: does the presentation reflect a clear understanding of the topic/subject?

feedback: did the student thoughtfully fill out the feedback cards while watching the other presentations?

 comments (*teacher*): additional direct feedback on the presentation to use during fearless feedback

MY NAME

TEAM PRESENTING

PRESENTATION FEEDBACK CARD

Fill out this card as your classmates present to help everyone improve.

1 THING I LIKED ABOUT YOUR PRESENTATION WAS...

1 THING I WISH YOU HAD DONE DIFFERENTLY IS...

1 THING I LEARNED IS...

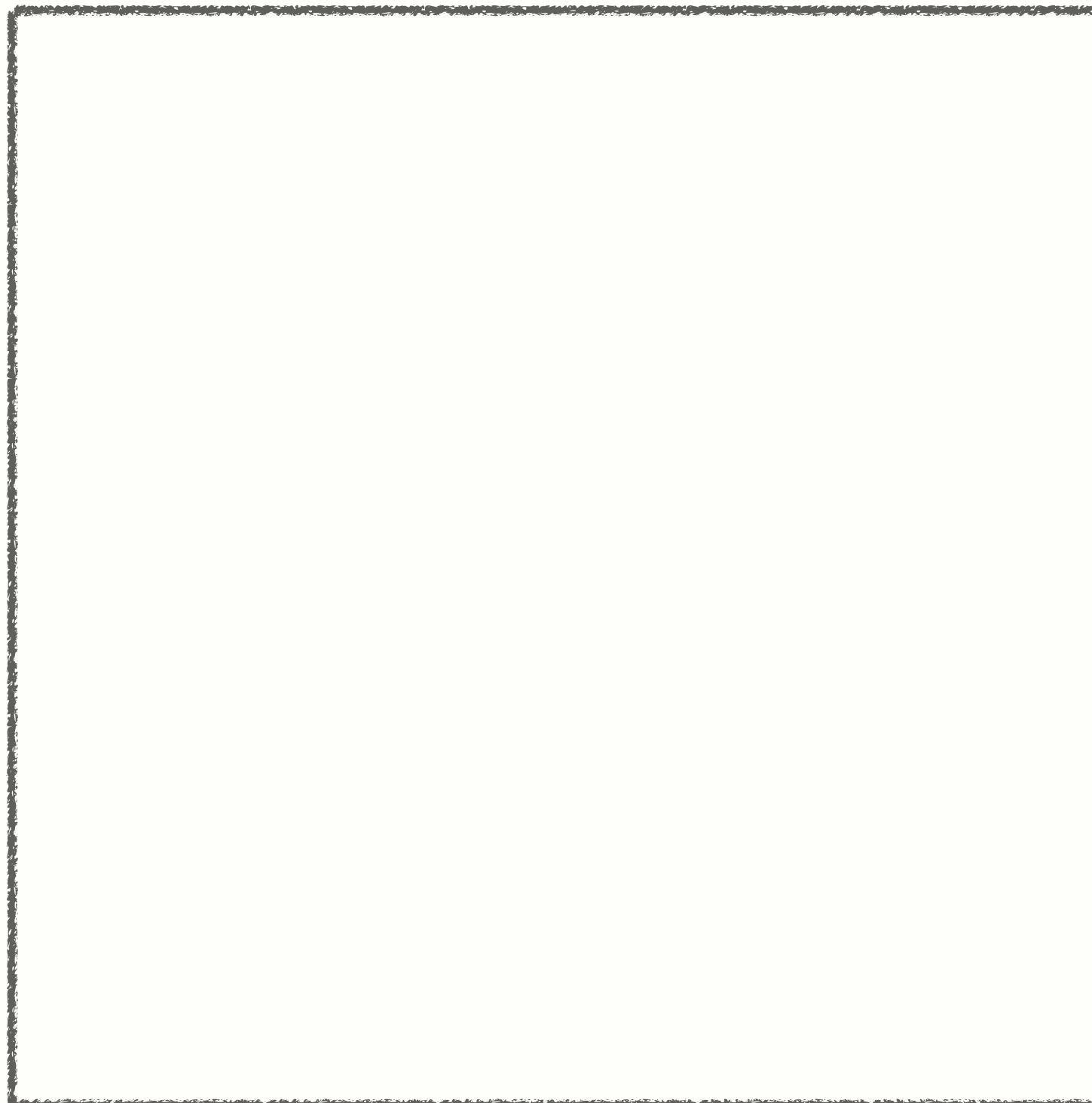
MY NAME

PERSON'S PROJECT

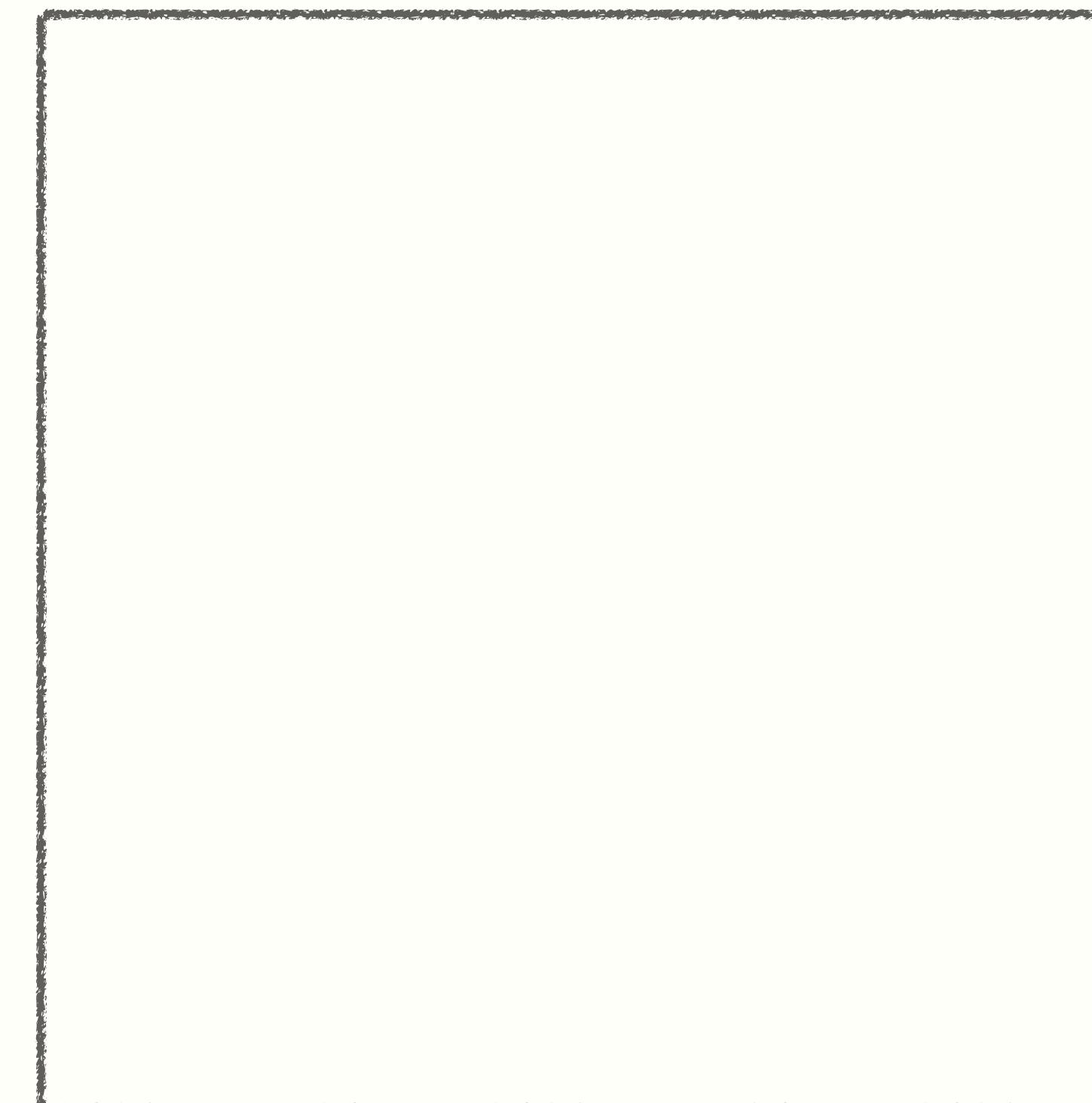
FEEDBACK CARD

Fill out this card as your classmates present to help everyone improve.

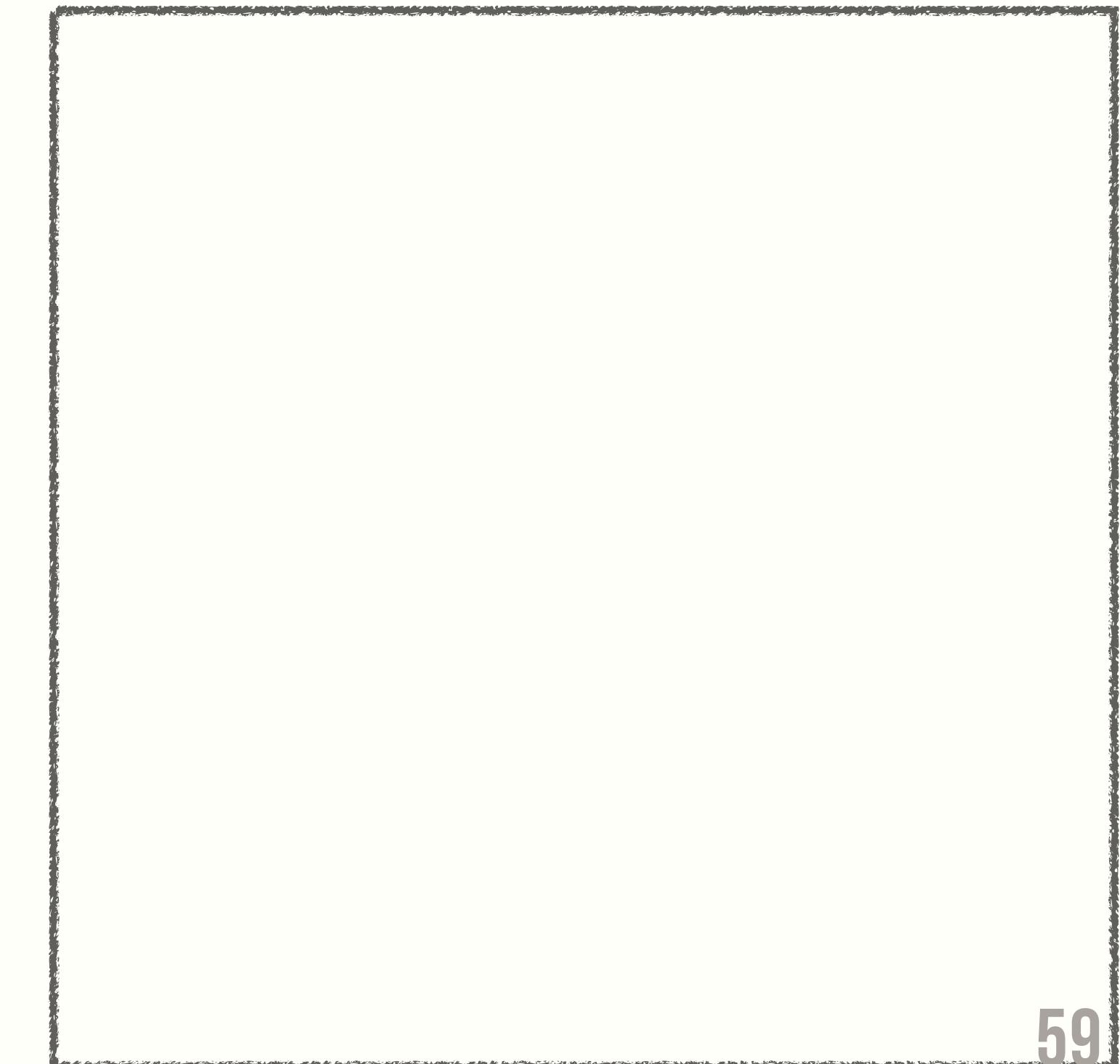
**DRAW OR WRITE
SOMETHING YOU LEARNED**

A large, empty rectangular box with a hand-drawn style border, intended for students to draw or write about what they learned.

**DRAW OR WRITE YOUR
FAVORITE PART**

A large, empty rectangular box with a hand-drawn style border, intended for students to draw or write about their favorite part of the project.

**DRAW OR WRITE ONE THING
YOU WISH THEY HAD DONE**

A large, empty rectangular box with a hand-drawn style border, intended for students to draw or write about one thing they wish the project had done differently.

APPLIED EXAMPLE

1

It's almost the end of the unit. Mrs. Smith uses the proto-prototyping assignment overview template to design a final assignment for the unit.

2

When class begins, she asks the students to get into their teams from the initial Rapid Research activity, where they were divided into the Loyalists, Revolutionaries, and British.

3

In their teams, she asks students to take ten minutes to write a half page reflection on what they've learned now about their assigned group that they didn't know before.

4

After the ten minutes, she calls the class back. She hands out the assignment overview ([page ___](#)) and announces that this will be the final grade for the American revolution unit.

5

She decides that the group has had a lot of team time, and this would be a good opportunity for personal reflection and assessment. As a result, she states that this is an individual assignment. Next class, each student will give a two minute presentation in front of the class about what they created.

6

For the rest of this class period, she has students write a proposal that includes what they want to do, why they want to do it, and how they plan on doing it. If students finish this early, they can begin working on their project.

7

As the class comes to a close, Mrs. Smith sends the students off with the assignment of coming back next period with a finished version. For the next class, she sets the room up theater style and brings in some popcorn. She writes the presentation order on the board and hands out the feedback cards.

8

She tells students that they must fill out a presentation feedback for each presentation. When the presenter is done, everyone will hand Mrs. Smith the feedback cards. She paperclips each student's feedback and holds on to them until the end of the class, where she will announce the fearless feedback activity.

9

To see how she crafted a fearless feedback assignment, check out the applied example on ([page ___](#)). After the class, Mrs. Smith uses the toolkit assessment card to reflect on her own teaching during the period.

PROMO PROTOTYPING

Choose which “visual aids” you want your students to create from the list below (or design your own!).

GRADE K-1 RECOMMENDATIONS

- drawing:** Create a drawing that shows what you've learned!
- storybook:** (teacher) Write out a story sequence, and have students draw accompanying illustrations.
- poem:** (teacher) Pick a poem or write one on the subject and have students practice, memorize and present it.

GRADE 2-4 RECOMMENDATIONS

- skit:** Write a skit with your team about something you learned. Be sure to have characters and a beginning, middle and end. Then, present to the class!
- role-play:** Take on a character. It can be a historical person, object, or key term. Dress up and present to the class!
- artwork:** Create a piece a drawing, painting, sculpture or other piece of art. Write a few sentences about what it means, and present to the class!

GRADE 5-7 RECOMMENDATIONS

- video:** Create a 2 minute video that tells a story: it could be about a key concept, person, term or element of your topic.
- role-play:** Take on a character. It can be a historical person, object, or key term. Dress up and give a presentation to the class in character!
- TED Talk:** Design a 9 minute talk, like the famous TED talks, that focuses on one, interesting part of your topic. Either record it before hand or present it live to the class!

GRADE 8-12 RECOMMENDATIONS

- video:** Create a 2 minute video that tells a story: it could be about a key concept, person, term or element of your topic.
- infographic:** Create an graphic about your idea/topic. Present it to the class. You can make it by hand, or use: vizualize.me; easel.ly; piktochart.com
- TED Talk:** Design a 9 minute talk, like the famous TED talks, that focuses on one, interesting part of your topic. Either record it before hand or present it live to the class!

PROMO PROTOTYPING **ASSIGNMENT**

FOR THIS ASSIGNMENT, YOU'LL SHOWCASE YOUR KNOWLEDGE BY CREATING ONE OF THE FOLLOWING OPTIONS. YOU'LL GIVE A TWO MINUTE PRESENTATION TO THE CLASS ON TUESDAY, 4/22.

OPTIONS

video: Create a 2 minute video that tells a story: it could be about a key concept, person, term or element of your topic.

role-play: Take on a character. It can be a historical person, object, or key term. Dress up and give a presentation to the class in character!

TED Talk: Design a 9 minute talk, like the famous TED talks, that focuses on one, interesting part of your topic. Either record it before hand or present it live to the class!

infographic: Create an graphic about your idea/topic. Present it to the class. You can make it by hand, or use: vizualize.me; easel.ly; piktochart.com

skit: Write a skit with your team about something you learned. Be sure to have characters and a beginning, middle and end. Then, present to the class!

RUBRIC

Fill in box with *needs improving (NI)*, *acceptable (A)*, or *extraordinary (E)*

- effort:** is it clear that the student put time and thought into making the best visual aid possible?
- creativity:** is the content put together in an interesting way?
- presentation:** was the presentation clearly thought out, rehearsed, and well executed?
- understanding:** does the presentation reflect a clear understanding of the American Revolution?
- feedback:** did the student thoughtfully fill out the feedback cards while watching the other presentations?

MY NAME

Kim

PRESENTER

Matt T.

PRESENTATION FEEDBACK CARD

Fill out this card as your classmates present to help everyone improve.

1 THING I LIKED ABOUT YOUR PRESENTATION WAS...

your skit was funny and kept me engaged

1 THING I WISH YOU HAD DONE DIFFERENTLY IS...

I wish you would talk a little louder- it was really hard to hear at some points

1 THING I LEARNED IS...

In 1775 the largest city in America was Philadelphia

A photograph of a large tree trunk with a textured brown bark. The tree has many branches with green leaves. The background is a clear blue sky.

ACTIVITY 4:

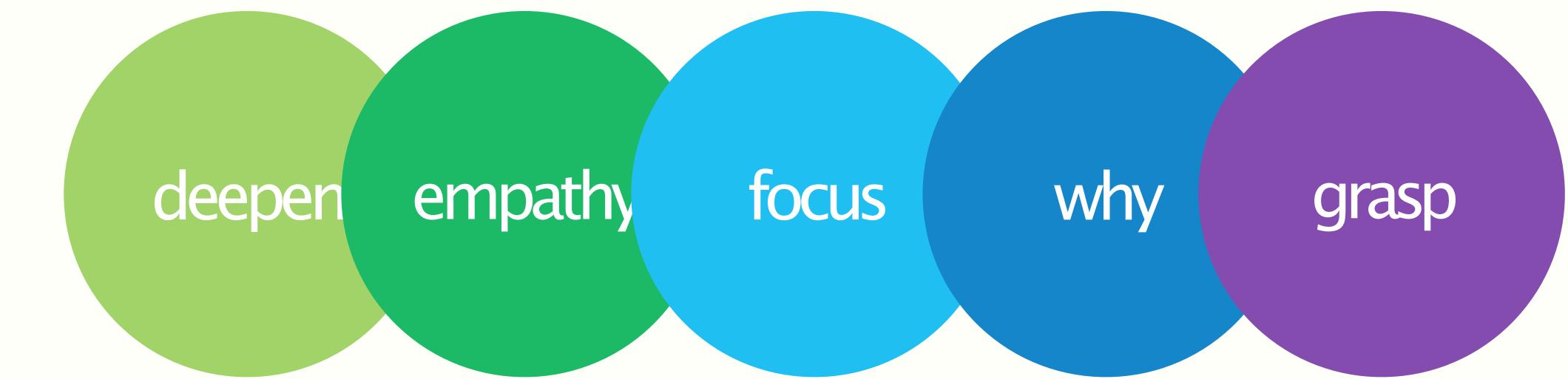
FEARLESS
FEEDBACK

GROW ON

FEEDBACK TO GROW

FEARLESS FEEDBACK

- › LESSON DETAILS
- › PREP
- › PROCESS NOTES
- › FAQS
- › ASSESSMENT CARD
- › APPLIED EXAMPLE
- › DESIGN CHECK-LIST



THIS EXERCISE TEACHES DESIGN THINKING AS IT APPLIES TO ITERATING IN ORDER TO GROW. THE GOAL IS TO SHOW STUDENTS HOW TO WELCOME FEEDBACK AND USE IT AS A SPRINGBOARD FOR GROWTH. THIS FINAL PHASE TAKES REFLECTION, EMOTIONAL INTELLIGENCE, AND GROWTH MINDSET. THIS ACTIVITY LEVERAGES THE DESIGN THINKING VALUES OF TESTING FOR FEEDBACK.

LESSON DETAILS

By the time students have reached this stage in the Design Thinking process, it is time for some personal disruption! Feedback and iteration is the final essential ingredient in helping students evaluate their creation and make it better.

There are two primary benefits from feedback and iteration. First, it gives students a real opinion related to their solution and it allows them to develop a more robust solution to similar prompts in the future. Second, the process teaches students how to give great feedback, and how to cope with receiving it. Learning to handle any type of feedback is a very difficult thing -- more often than not, students are not exposed to this type of learning until their professional careers. This is where the true value lies: Feedback teaches students how to communicate effectively, articulate their logical and emotional feelings, internalize these experiences, and grow as individuals. One of the primary metrics for success in the design process is if students can take feedback and implement it to iterate on their projects and on their team dynamics.

This phase can be incorporated into presentation day of promo prototyping, or run separately. As a class, you'll discuss the value of feedback. An interesting lens to take is to view feedback, positive or negative, as the highest form of a compliment. If someone is taking the time to share, it means that they care.

Next, group two teams from Promo-Prototyping together and have them present their feedback cards on the other team's visual aid and presentation. In the process, have them fill out a team feedback form like the one included on the assessment card, or invent your own form of feedback capture.

ACTIVITY PREP

SUGGESTED
RESOURCES

- printed out feedback assessments
- an article or handout on the value of feedback
- preselected music for the discussion time

we know resources vary. The only material students truly need access to is a way to capture their feedback- present it in the way best for you.

- have spaces for the teams to discuss

Students should be broken up into groups and the class must be set up to accommodate easy conversation between such groups. This usually works best when desks are clumped into groups of four. The teacher should encourage students to spread out or go outside (or another location) where they can speak thoughtfully. Groups should have a teacher nearby to monitor feedback and help students initiate.

CLASSROOM
SET-UP



iterate on the feedback prompts from the assessment card or create your own feedback capture mechanism.



prepare an example of good, constructive feedback and one example of bad feedback to share during the initial discussion.



decide if you will collect the feedback sheets or ask students to write a reflection responding to the prompts on the assessment card.

PROCESS NOTES

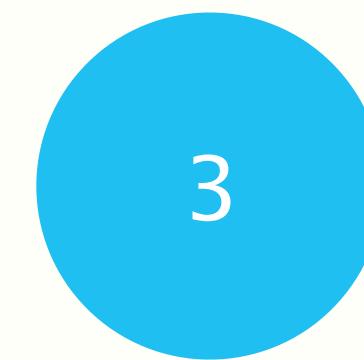
THE QUESTIONS YOU DESIGN ARE KEY HERE. KEEP THESE GUIDELINES IN MIND:



feedback is most efficient when given right after the fact. Try to allow for the feedback session to be as close to the presentations as possible.



moving from group to group to throw in your own feedback examples can help ensure that they are staying on track.



collecting the feedback sheet or in reflection form causes students to take the activity more seriously. More importantly, it forces students to actually register the feedback.

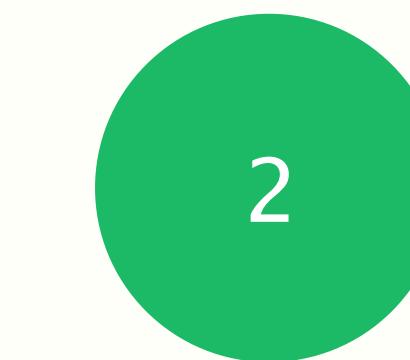
FAQS

WE LOVE QUESTIONS. IF THESE DON'T DO IT FOR YOU, FEEL FREE TO CALL OUR 24 HOUR HOTLINE AT (707) 820-REVV



what if we don't have time to do this in person?

feedback is still valuable. Distribute the sheets and assign students to fill one out during each presentation to keep them engaged.



how do I actually grade something so subjective?

we encourage viewing this as part of participation grades, or assessing based on completion.



how can I see this activity's effects?

a handy trick: keep each person's assessment sheets. If you run the promo prototyping activity again with a different topic, cross reference to call out any improvement or repeated mistakes.

ASSESSMENT CARD

PERSONAL ASSESSMENT

ASK YOURSELF THE FOLLOWING TO CHALLENGE YOURSELF AS A DESIGNER AND EDUCATOR.

1

did my work earlier in the unit/in the earlier exercises reflect positively during this exercise?

2

was I able to create an energetic environment to match the mood of the activity? Why/Why not?

3

did I notice any patterns about how comfortable or uncomfortable students felt during group presentations?

4

what was the most positive thing I did during this exercise, and how can I amplify that variable?

5

what was the most negative thing I did during this exercise, and how can I get rid of that variable?

STUDENT ASSESSMENT

WE RECOMMEND USING THESE AS A GUIDELINE FOR GRADING, AND SHARING THEM AT THE START WITH THE STUDENTS.

1

team: do the students show an understanding of the logic behind the initial key subject insight?

2

team: do students show a grasp on clear, foundational facts related to the topic?

3

team: does the visual aid reflect a high level of effort? Is the presentation well thought out, clearly planned, and practiced?

4

team: does the visual aid show a grasp on the topic thesis?

5

*We recommend incorporating participation in the next exercise, fearless feedback, into students' individual grades.

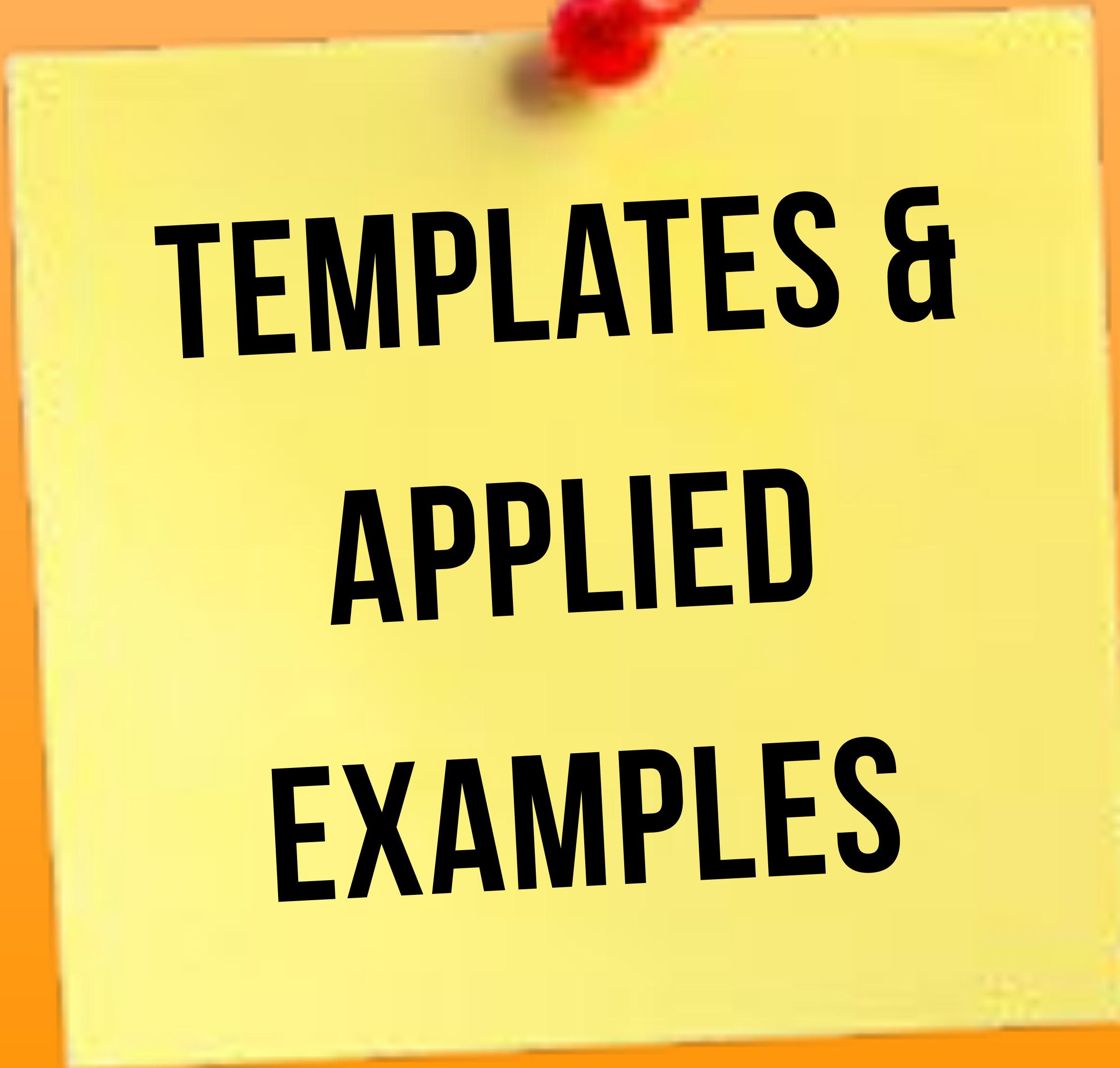
DESIGN CHECKLIST

DO I HAVE....

-  **topic prompts** from the creativity matrix or other
-  **debrief prompts** for initial group reflection
-  **materials** for prototyping
-  **music** for work time
-  **guidelines** for visual aids
-  **thoughtfully made teams**
-  **presentation rubric** for students

USE THIS CHECKLIST TO HELP YOU AS YOU DESIGN YOUR CURRICULUM.





TEMPLATES & APPLIED EXAMPLES

PERSONAL FEEDBACK JOURNEY

As you collect feedback cards, think about ways that you can immediately use this amazing feedback to grow!

1 THING I LIKE ABOUT WHAT I DID IS...

1 THING I WISH I HAD DONE DIFFERENTLY IS...

1 GREAT PIECE OF FEEDBACK I GOT FROM MY CLASSMATES ...

1 THING I'M GOING TO CHANGE ABOUT MY PRESENTATION STYLE IN THE FUTURE IS...

MY NAME

MY GROWING SUPERHERO

color in the superhero you want, and give him/her a name! Now, it's time to make him/her even stronger!



WHAT'S ONE THING YOUR SUPERHERO LEARNED TODAY?



WHAT'S ONE THING YOUR SUPERHERO IS GOING TO DO
DIFFERENTLY FROM NOW ON TO GROW STRONGER?

APPLIED EXAMPLE

- 1
- 2
- 3
- 4

At the end of presentation day, Mrs. Smith has a whole stack of feedback cards for each student. She hands each student their feedback stack, and gives them a personal feedback journey map.

Mrs. Smith knew there wouldn't be time for students to meet and give each other feedback face to face. This was unfortunate: normally she would've liked students to work on their in person feedback skills.

Instead, Mrs. Smith makes it homework to fill out the personal feedback journey map.

She uses the toolkit assessment card to evaluate her performance over the entire unit.



PERSONAL FEEDBACK JOURNEY

As you collect feedback cards, think about ways that you can immediately use this amazing feedback to grow

1 THING I LIKE ABOUT WHAT I DID IS...

push myself to be creative with the video

1 THING I WISH I HAD DONE DIFFERENTLY IS...

practiced my two minute video ahead of time

1 GREAT PIECE OF FEEDBACK I GOT FROM MY CLASSMATES ...

have more eye contact while presenting

1 THING I'M GOING TO CHANGE ABOUT MY PRESENTATION STYLE IN THE FUTURE IS...

try and practice more so I can look down at my notes less and look at the audience more



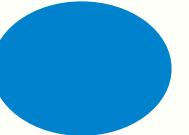
A yellow sticky note with two red pushpins at the top center. The note has a white border and contains the text "TEMPLATES APPENDIX" in large, bold, black capital letters.

TEMPLATES

APPENDIX

THROW IN YOUR OWN TWISTS OR USE THEM AS IS.

TOOLKIT TEMPLATES

-  rapid research board set-up
-  cake dive template
-  creativity spark list
-  creativity spark debrief guide
-  brainstorming rules
-  promo prototyping student assignment handout
-  promo prototyping student rubric
-  promo prototyping feedback card (one for K-1 & one for the 2-12)
-  fearless feedback reflection template (one for K-1 & one for the 2-12)
-  student feedback survey

rapid research board setup

SET EACH TEAM UP WITH A POSTER BOARD OR

WHITEBOARD SPACE TO POST UP THE FOLLOWING.

FACT FINDER

design questions that cause students to find 3 key facts related to the topic

factual
answer to
question #1

factual
answer to
question #2

factual
answer to
question #3

THEME FINDER

design questions that cause students to find 2 key themes related to the topic

theme #1

theme #2

TERM FINDER

have students define 3 key terms (people, vocab, places, events, etc)

key term 1 &
definition

key term 2 &
definition

key term 3 &
definition

INTERESTING FACT FINDER

ask students to identify a fact that was interesting or surprising

surprising/
interesting
fact

CAKE DIVE

NAME:

QUESTION/PROMPT TO ANSWER:

START WITH THE ANSWER, THEN ASK YOURSELF WHY THAT IS TO UNDERSTAND THE UNDERLYING CONCEPT.

ANSWER

NEXT

LAYER

GETTING

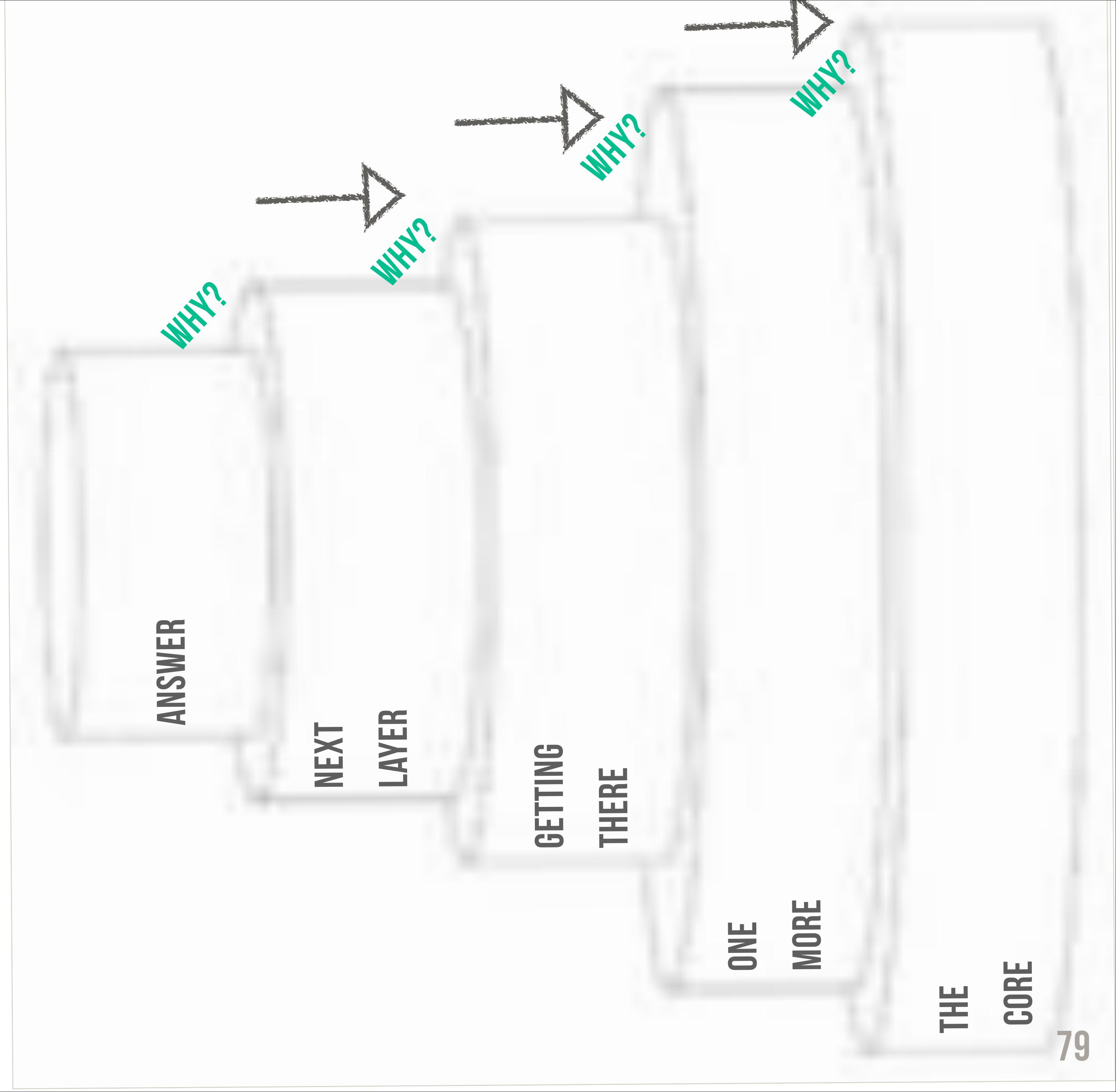
THERE

ONE

MORE

THE

CORE



CREATIVITY SPARKS

Choose from the list of sparks below (or design your own!).

GRADE K-1 RECOMMENDATIONS

- If you were insert character or object from the topic here what would you want most right now?
- Imagine you're building a game about or a toy insert character or object from the topic here. How would it look? Why?
- Think about your favorite book. Imagine if insert character or object from the topic here were in the story. What would the story be like now?

GRADE 5-7 RECOMMENDATIONS

- An alien race is taking over Earth. Luckily, there's a way to save the planet: you must explain to these insert your subject here- loving aliens how your profound insight affects everyday life on Earth, making it worth preserving.
- You're a super secret spy agent called in to give the President a briefing on insert your subject here. But since the President is very busy, you only have 45 seconds.
- You've been hired by ed tech global to use social media to make insert your subject here "cool". How will you do it?

GRADE 2-4 RECOMMENDATIONS

- The President of the United States just called to ask for your help. He needs you to find a way to use insert character or object from the topic here to make America better. How will you do it?
- Imagine that instead of buying things with money, you could only buy things if you could explain insert character or object from the topic here. How would you teach it to other people so that they could buy things?
- You found a time machine! Now you can go back to when insert character or object from the topic here was created/discovered/founded/living. What's it like?

GRADE 8-12 RECOMMENDATIONS

- You've been hired by ed tech global to make your subject more relevant to the rising generation by leveraging technology, social media and/or gaming. What will you do?
- We've been launched 150 years into the future. What does this insight look like now?
- You just received \$1 million dollars to make insert your subject here widely known, understood and cool to learn. How will you use the money to do that?

BRAINSTORMING RULES

THE ABILITY TO BRAINSTORM IS IMPORTANT IN ALL FORMS OF PROBLEM SOLVING. TEACH STUDENTS HOW TO DO IT RIGHT BY FOLLOWING THE FEW SIMPLE GUIDELINES BELOW.

no no's

reserve judgement.
Make saying "no"
forbidden. Instead,
have students say
"yes and"

be creative!

try to think out of the
box. Encourage
students to be fearless
in their ideas.

headline

present the
headline of your idea,
not the whole article!

convo by convo

stay on topic! Have
students self-regulate
to make sure they're
on track.

write it down

write down any and all
ideas, even if another
team member came up
with it

FILL OUT THE FOLLOWING TO HELP YOU CREATE DEBRIEF QUESTIONS

GETTING A PULSE ON THE CLASS

how did that feel?

1

No matter what the age group, gauge the reactions of the class. Popcorn style works well here, or you can call on each team individually.

what was the hardest part?

2

This is a good opportunity to discover what concepts the class might be struggling with.

what was the most fun idea you came up with?

3

Give the students the fun opportunity to show off their creativity.

RE-ENFORCING LESSON LEARNINGS

1

what did you learn about the topic?

You can shape the discussion to focus on a topic you want to re-enforce, or take any learnings they mention and reinforce the concept they're bringing up.

2

is there anything about the topic you realized you didn't understand?

Brainstorming and explaining often expose any holes in students' knowledge.

3

why do you think brainstorming sessions like this are important?

Take a chance to talk about the value of being able to think through problems and come up with solutions on tests, during work and during everyday life.

PROMO PROTOTYPING

Choose which “visual aids” you want your students to create from the list below (or design your own!).

GRADE K-1 RECOMMENDATIONS

- drawing:** Create a drawing that shows what you've learned!
- storybook:** (teacher) Write out a story sequence, and have students draw accompanying illustrations.
- poem:** (teacher) Pick a poem or write one on the subject and have students practice, memorize and present it.

GRADE 5-7 RECOMMENDATIONS

- video:** Create a 2 minute video that tells a story: it could be about a key concept, person, term or element of your topic.
- role-play:** Take on a character. It can be a historical person, object, or key term. Dress up and give a presentation to the class in character!
- TED Talk:** Design a 9 minute talk, like the famous TED talks, that focuses on one, interesting part of your topic. Either record it before hand or present it live to the class!

GRADE 2-4 RECOMMENDATIONS

- skit:** Write a skit with your team about something you learned. Be sure to have characters and a beginning, middle and end. Then, present to the class!
- role-play:** Take on a character. It can be a historical person, object, or key term. Dress up and present to the class!
- artwork:** Create a piece a drawing, painting, sculpture or other piece of art. Write a few sentences about what it means, and present to the class!

GRADE 8-12 RECOMMENDATIONS

- video:** Create a 2 minute video that tells a story: it could be about a key concept, person, term or element of your topic.
- infographic:** Create an graphic about your idea/topic. Present it to the class. You can make it by hand, or use: vizualize.me; easel.ly; piktochart.com
- TED Talk:** Design a 9 minute talk, like the famous TED talks, that focuses on one, interesting part of your topic. Either record it before hand or present it live to the class!

PROMO PROTOTYPING

student grading rubric: choose which grading format is applicable

PERSONAL GRADE

Fill in box with *needs improving (NI)*, *acceptable (A)*, or *extraordinary (E)*

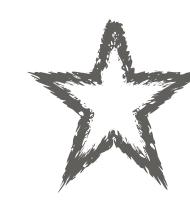
effort: is it clear that the student put time and thought into making the best visual aid possible?

creativity: is the content put together in an interesting way?

presentation: was the presentation clearly thought out, rehearsed, and well executed?

understanding: does the presentation reflect a clear understanding of the topic/subject?

feedback: did the student thoughtfully fill out the feedback cards while watching the other presentations?

 comments (*teacher*): write additional direct feedback on the presentation to use during fearless feedback

TEAM GRADE (IF APPLICABLE)

Fill in box with *needs improving (NI)*, *acceptable (A)*, or *extraordinary (E)*

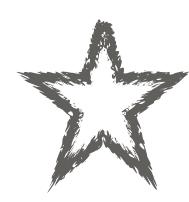
collaboration: is it clear that every team member added value to the end product?

creativity: is the content put together in an interesting way?

presentation: was the presentation clearly thought out, rehearsed, and well executed?

understanding: does the presentation reflect a clear understanding of the topic/subject?

feedback: did the student thoughtfully fill out the feedback cards while watching the other presentations?

 comments (*teacher*): additional direct feedback on the presentation to use during fearless feedback

MY NAME

TEAM PRESENTING

PRESENTATION FEEDBACK CARD

Fill out this card as your classmates present to help everyone improve.

1 THING I LIKED ABOUT YOUR PRESENTATION WAS...

1 THING I WISH YOU HAD DONE DIFFERENTLY IS...

1 THING I LEARNED IS...

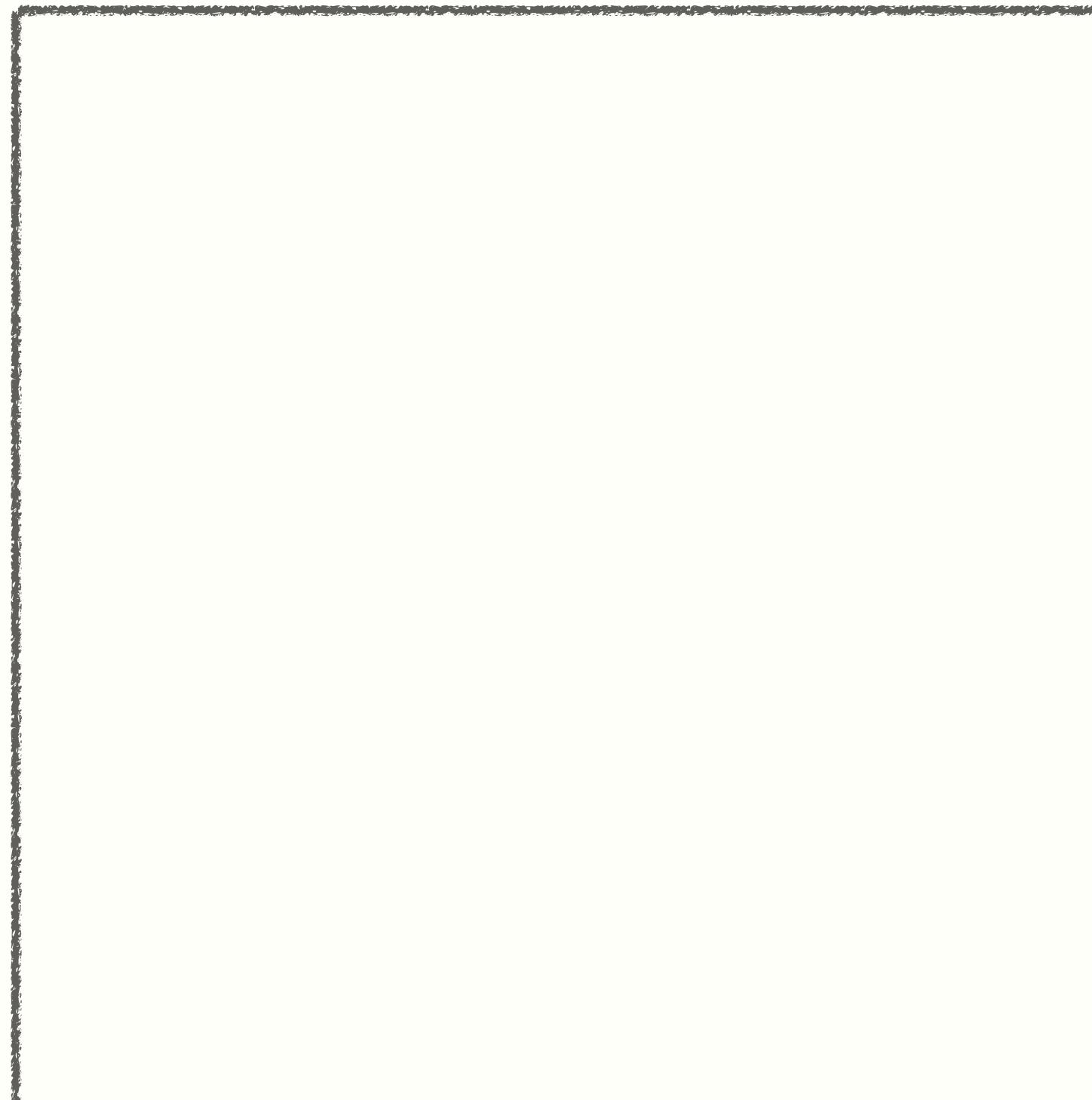
MY NAME

PERSON'S PROJECT

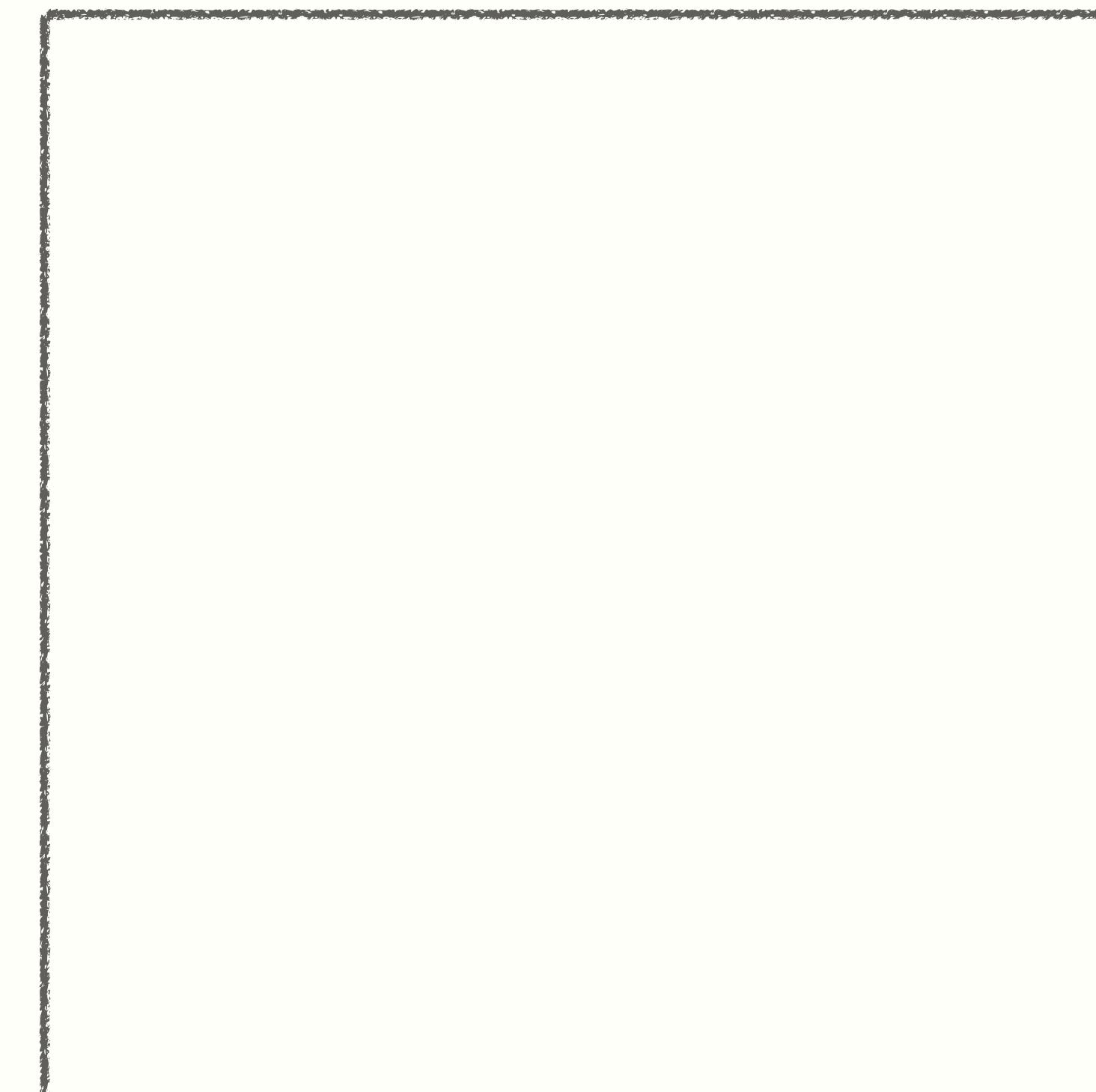
FEEDBACK CARD

Fill out this card as your classmates present to help everyone improve.

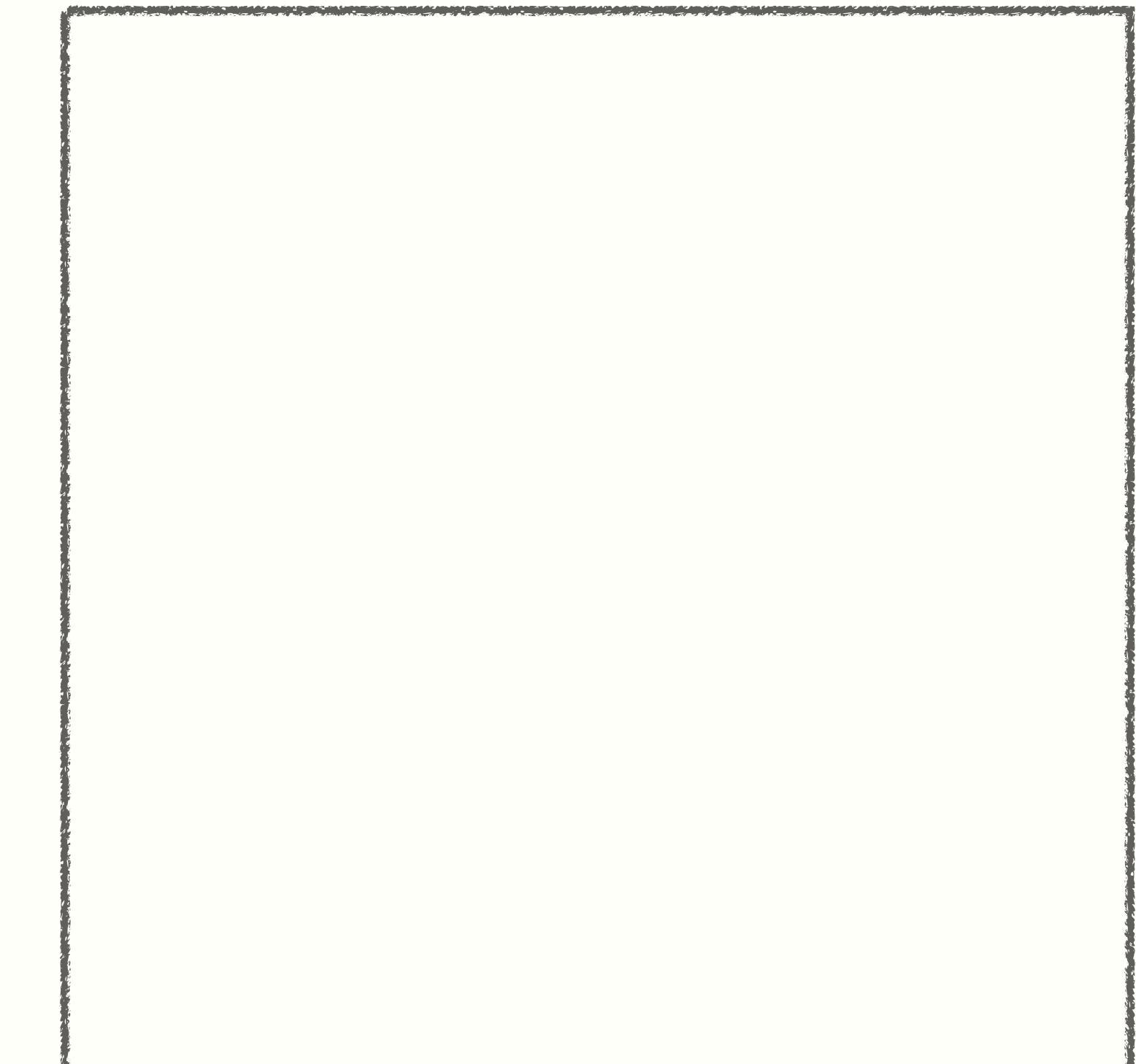
DRAW OR WRITE
SOMETHING YOU LEARNED

A large, empty rectangular box with a hand-drawn style border, intended for students to draw or write about what they learned.

DRAW OR WRITE YOUR
FAVORITE PART

A large, empty rectangular box with a hand-drawn style border, intended for students to draw or write about their favorite part of the project.

DRAW OR WRITE ONE THING
YOU WISH THEY HAD DONE

A large, empty rectangular box with a hand-drawn style border, intended for students to draw or write about one thing they wish the project had done differently.

PERSONAL FEEDBACK JOURNEY

As you collect feedback cards, think about ways that you can immediately use this amazing feedback to grow!

1 THING I LIKE ABOUT WHAT I DID IS...

1 THING I WISH I HAD DONE DIFFERENTLY IS...

1 GREAT PIECE OF FEEDBACK I GOT FROM MY CLASSMATES ...

1 THING I'M GOING TO CHANGE ABOUT MY PRESENTATION STYLE IN THE FUTURE IS...

MY NAME

MY GROWING SUPERHERO

color in the superhero you want, and give him/her a name! Now, it's time to make him/her even stronger!



WHAT'S ONE THING YOUR SUPERHERO LEARNED TODAY?



WHAT'S ONE THING YOUR SUPERHERO IS GOING TO DO
DIFFERENTLY FROM NOW ON TO GROW STRONGER?

THANK YOU, HEROES.

**WE HOPE THIS TOOLKIT EQUIPS YOU WITH AN EMPOWERING
SECRET INGREDIENT. WE BELIEVE IN YOUR CREATIVITY, AND
FEEL FORTUNATE TO BE PART OF YOUR LIFE CHANGING WORK.**

THANK YOU. DESIGN ON!

REVVED EDUCATION DESIGN

517 COWELL LANE, STANFORD, CA 94305

REVVED.US

858.472.2055

rewed

EDUCATION MEETS INNOVATION